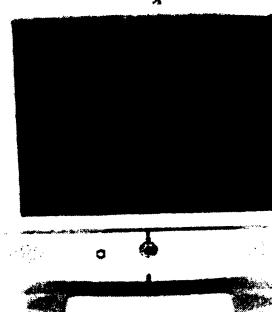


# Service Service Service



Smart Interface/PnP/Sliding Height Adjustment  
High Bright Picture/Auto Picture Adjustment/Wide Viewing Angle



180MT10P/00C  
(HIT panel)

# Service Manual

## TABLE OF CONTENTS

Description	Page	Description	Page
Important Safety Notice.....	2	Repair tips.....	38
Technical Data .....	3	Colour Adjustment.....	39~44
TV control.....	4~6	Block Diagram and control pannel(C.B.A).....	45
TV OSD menus.....	7~10	Scaler board C.B.A.....	46~47
Connection to PC .....	11~12	Conjunction diagram (C.B.A) and Phone Jack	
Description of Controls.....	13~14	PCB C.B.A.....	48
Clock & Phase Adjustments.....	15	Sound Diagram(C.B.A).....	49
OSD Control Structure.....	16~19	Video Decoder Diagram.....	50
Definition of Pixel Defects.....	20	MCU Schematic Diagram.....	51
Wiring Diagram.....	21	Scaler Diagram.....	52
Mechanical Instructions.....	22~24	Video I/O Schematic Diagram.....	53
Electrical Instructions.....	25~27	Inverter Diagram and Layout Drawings.....	54
Factory Adjustment.....	28	Exploded View.....	55
Safety Test Requirements.....	29	Recommended Parts List.....	56
DDC Instructions.....	30~34	Spare Parts List.....	57~60
DDC Data.....	35	General Product Specification.....	61~96
Serial number modification- EEPROM(OSD)....	36~37	General Trouble Shooting Guide.....	97~115

Horizontal frequencies  
30 - 80 kHz

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

**CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING.**

**REFER TO BACK COVER FOR IMPORTANT SAFETY GUIDELINES**

飛利浦



PHILIPS

# Technical Data

180MT10P LMT

3

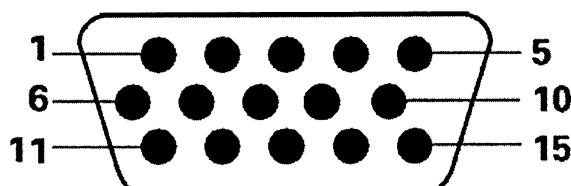
Go to cover page

## Technical Specifications

LCD Panel	: TFT LCD
Screen type	: 18.1 " visual
Screen dimensions	: 0.2805 x 0.2805 mm
Pixel pitch	: 1280 x 1024 pixels
LCD Panel type	R.G.B. Vertical stripe Anti-glare polarizer
Effective viewing area	: (H)359.0 x (V)287.2 mm
Display Colors	: 8 bits interface (16.7M colors)
SCANNING	
Horizontal scan range	: 30 kHz to 80 kHz
Vertical scan range	: 56 Hz to 75 Hz
Video	
Video dot rate	: 135MHz
input impedance	
-Video	: 75 ohms
-Sync	: 2 KOhm
Input signal levels	: 700m Vpp
Synchronization input signals	: Separate sync composite sync
Sync polarities	: Positive and negative
Input Frequency	:
SXGA	64-80 KHz,Vsync 60-75 Hz(N.I.)
XGA Hsync	48-61 KHz,Vsync 60-75Hz(N.I.)
SVGA Hsync	35-50 KHz,Vsync 56-75Hz(N.I.)
VGA Hsync	31-38 KHz,Vsync 60-75Hz(N.I.)
Video interface	: D-Sub,S-Video,TV-RF, SCART or composite and components video
AUDIO	
Input Level for PC/SVHS/SCART:	500mV nominal
Headphone out signal level	: 4mW max.
Loudspeaker	: 5 W Stereo Audio(2.5W/chanel RMS x2,200Hz~10KHz,4ohm,10%THD)
OPTICAL CHARACTERISTICS	
Contrast ratio	: 300:1 (typ.)
Brightness	: 300 cd/m <sup>2</sup> (typ.)
Peak contrast angle	: 6 o'clock
White Chromacity	: x:0.281 y : 0.311 (at 9300° K) x:0.312 y : 0.338 (at 6500° K)
Viewing angle (C/R>=10)	: Upper>=85° (typ.)Lower>=85°(type) Left and Right >=85° (typ.)
Response time	: <= 30ms(typ.)
Resolution and Preset Modes	
Maximum	: 1024 x 1024 at 75Hz
Recommended	: 1024 x 1024 at 60Hz
Physical Characteristics	
Dimensions(WxHxD)	: 452 x 452 x 200 mm (incl. Pedestal)
Weight (monitor only)	: 6.3 kg
Tilt (Forward/Backward)	: -0° / 20°
Power supply	: 100 - 240 VAC, 50/60Hz
Power consumption	: 68 W (typ.)
Temperature (operating)	: 5 C to 35 C
Relative Humidity	: 20% to 80%
System MTBF	: 50K Hrs

## Pin Assignment

1. The 15-pin D-sub connector (male) of the signal cable



Pin No.	Assignment	Pin No.	Assignment
1	Red video input	9	DDC+5V
2	Green video input	10	Logic ground
3	Blue video input	11	Identical output connected to pin 10
4	Identical output connected to pin 10	12	Serial data line (SDA)
5	Cable detect	13	H. Sync / H+V
6	Red video ground	14	V. Sync
7	Green video ground	15	Data clock line (SCL)
8	Blue video ground		

## Automatic Power Saving

If you have VESA's DPMS compliance display card or software installed in your PC, the monitor can automatically reduce power consumption when power saving function active. And if an input from keyboard, mouse or other input devices is detected, the monitor will automatically "wake up". The following table shows the power consumption and signaling of this automatic power saving feature :

Power Management Definition					
VESA's mode	VIDEO	H-SYNC	V-SYNC	POWER USED	LED COLOR
ON	Active	Yes	Yes	68W(typ.)	Green
Stand-by	Blanked	No	Yes	< 2 W	Blinking Green
Suspend	Blanked	Yes	No	< 2 W	Blinking Green
OFF	Blanked	No	No	< 2 W	Blinking Green

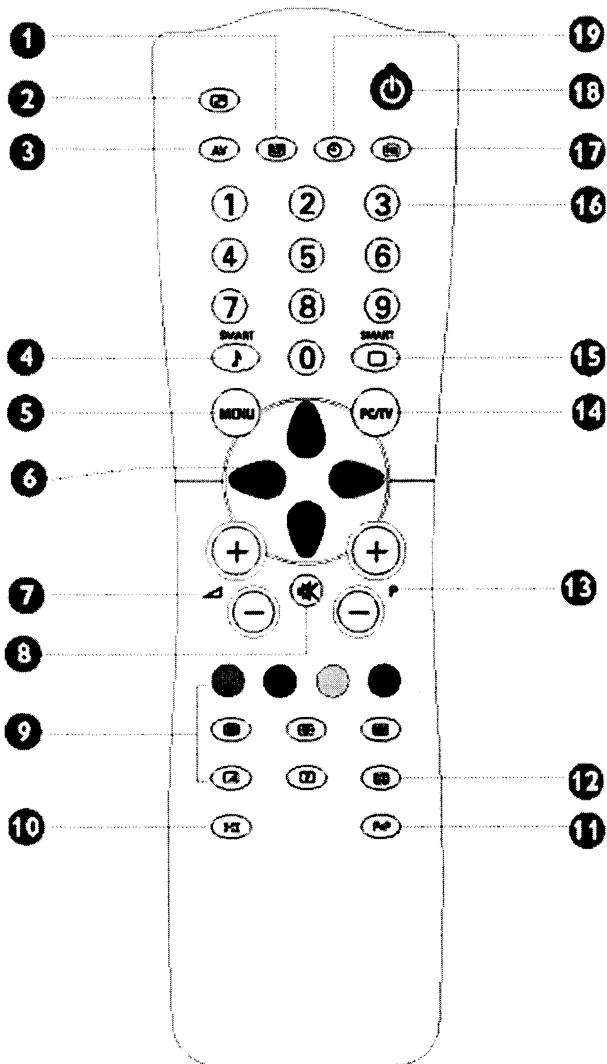
This monitor is ENERGY STAR® compliant. As an ENERGY STAR® Partner, PHILIPS has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

## 17 Factory preset mode:

Mode	Resolution	H. freq. / V. freq	Standard
1.	640 x 350	31.469Khz/70.087Hz	VGA
2.	720 x 400	31.469Khz/70.087Hz	VGA
3.	640 x 480	31.469Khz/59.940Hz	VGA
4.	640 x 480	35.000Khz/66.667Hz	Macintosh
5.	640 x 480	37.861Khz/72.809Hz	VESA
6.	640 x 480	37.500Khz/75.000Hz	VESA
7.	800 x 600	35.156Khz/56.250Hz	VESA
8.	800 x 600	37.879Khz/60.317Hz	VESA
9.	800 x 600	48.077Khz/72.188Hz	VESA
10.	800 x 600	46.875Khz/75.000Hz	VESA
11.	832 x 624	49.700Khz/75.000Hz	Macintosh
12.	1024 x 768	48.363Khz/60.004Hz	VESA
13.	1024 x 768	56.476Khz/70.069Hz	VESA
14.	1024 x 768	60.023Khz/75.029Hz	VESA
15.	1152 x 870	68.7Khz/75.029Hz	VESA
16.	1280 x 1024	64.0Khz/60.0Hz	VESA
17.	1280 x 1024	80.0Khz/75.029Hz	VESA

## TV control

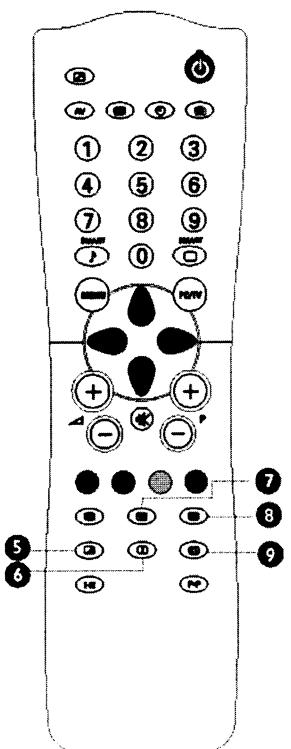
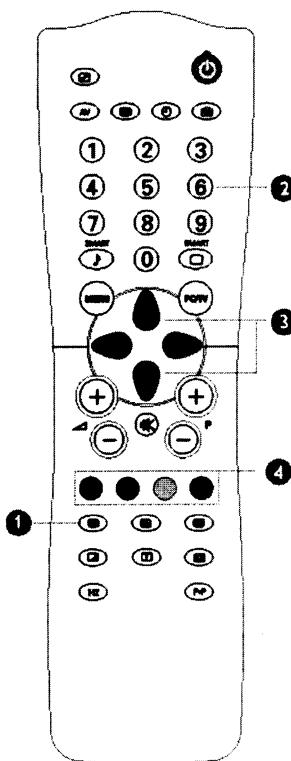
### Use your remote controller



- 1 PIP Shift
- 2 PIP On/Off, Size
- 3 AV source
- 4 Smart sound controls To access a series of settings: VOICE, MUSIC, THEATRE and return to PERSONAL
- 5 Menu To display or exit from the menus
- 6 Cursor These 4 keys are used to move within the menus
- 7 Volume To adjust the sound level
- 8 Mute To disable or enable the sound
- 9 Teletext features
- 10 Sound mode To switch from STEREO to MONO or to choose between Dual I and Dual II for bilingual transmissions. For TV sets fitted with NICAM reception, depending on the transmission, you can switch from CAMSTEREO to MONO or choose between NICAM DUAL I, NICAM DUAL II and MONO. When the sound mode is switched to MONO, the indication is displayed in red.
- 11 Previous programme To access the previously viewed programme.
- 12 Screen information To display/remove the programme number, the name (if it exists), the time, the sound mode and the time remaining on the timer. Hold down for 5 seconds to permanently display the programme number on the screen. The volume level and the smart control adjustments are then displayed each time they are used.
- 13 Selecting TV programmes To move up or down a programme. The number, (the name) and the sound mode are displayed for a few seconds. For some TV programmes the title of the programme appears at the bottom of the screen.
- 14 PC/TV mode selection
- 15 Smart picture controls To access a series of settings: RICH, NATURAL, SOFT, MULTIMEDIA and return to PERSONAL.
- 16 Numerical keys For direct access to programmes. For a 2 digit programme number, the 2nd digit must be entered before the dash disappears.
- 17 Program List
- 18 Standby To set the TV to standby mode. To switch the TV set on again, press -, +, or any digit between 0 and 9.
- 19 Sleep timer To select the length of time before the set automatically switches to standby (from 0 to 240 minutes)

## Using the Teletext (for areas where teletext service is available)

Teletext is an information system broadcast by certain TV channels which can be consulted in the same way as a newspaper. It also provides subtitles for the hard of hearing or people who are unfamiliar with the broadcast language (cable TV network, satellite channels, etc.).



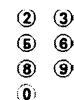
### Press button

**1 On/Off teletext** Page number (always 3 digits).



Note: If selected TV channel does not broadcast teletext, P100 is displayed and the screen remains black. Exit teletext mode and choose another TV channel.

**2 Selecting a teletext page** Key in the required teletext page (3 digits). The page number is displayed at the top left hand corner of the screen. When the teletext page is located, the counter stops searching. If the counter keeps searching, it means that the page is not available for selection. If you make a mistake in keying the page number, you have to complete keying the 3-digit number before re-keying the correct page number.



**3 Accessing a teletext page** Press the CURSOR UP button to display the previous page and the CURSOR DOWN button to display the next page.



**4 Direct Access** The 4-colour buttons allow you to access directly an item or corresponding pages.



**5 Mix** Allows you to superimpose the teletext page over the TV programme. Press the button the second time to return to teletext page only.

**6 Reveal/Conceal** Press the button once to reveal hidden information (solutions to puzzles, riddles, etc.). Press the button the second time to conceal information.

**7 Enlarge** Press the button once to enlarge and view the top half of the page. Press the button the second time to enlarge and view the bottom half of the page. Press the button the third time to return to normal size page.

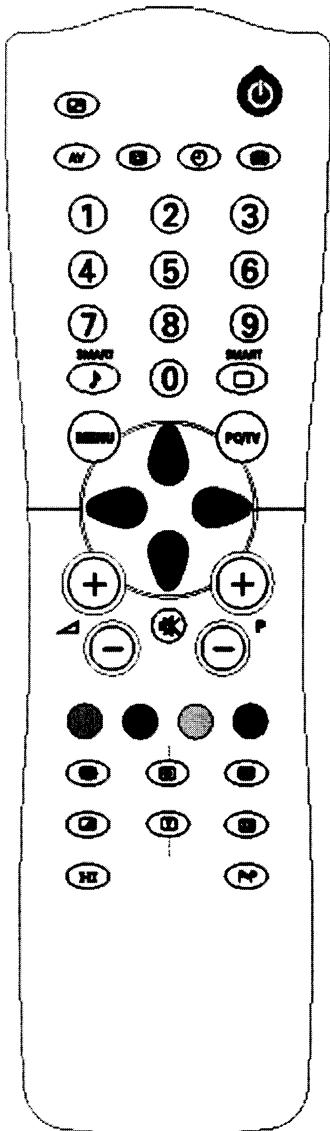
**8 Hold** A selected page sometimes contains a few sub-pages. The sub-page will automatically move to the next sub-page after about 20 seconds. The total number of sub-pages are indicated at the top right hand corner of the screen. Press the button once to hold page and the second time to release holding of page.

**9 Main Index** Press the button to return to the main index (generally on page 100).

## TV control

### Using the Programme Listing

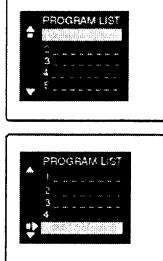
Programme listing feature allows you to navigate through a list of installed programmes for a quick overview of the channels installed on your television



#### Press buttonResult

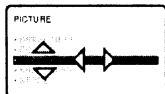
- 1. Display the list of installed programmes. The current channel is highlighted.
- 2. Cycle through the programme list and highlight the channel number you want to view.
- 3. Activate the channel you have selected.
- 4. Exit menu from screen or wait for the menu to time out and Disappear from screen.

#### onScreen



## TV OSD Menus

### Using other menus (With remote controller)



### Choosing a language and country



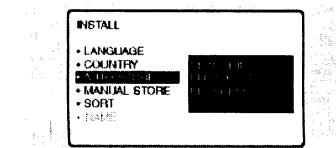
### Manual tuning



1. Press the MENU key to display the main menu.
2. Select INSTALL ( ), then press ( ). The INSTALL menu appears.
3. Press ( ) to go into the LANGUAGE menu.
4. Select your language with the ( ) keys.
- The menus will appear in the chosen language.
5. Press ( ) to exit the LANGUAGE menu.
6. Select the option COUNTRY and press ( ).
7. Select your country with ( ) keys.
- If your country does not appear in the list, select OTHER.
8. Press ( ) to exit the COUNTRY menu.
9. To exit from the menus, press ( ).

### Automatic tuning

This menu allows you to automatically search for all the programmes available in your region (or on your cable network).



180MT10P LMT 7  
Go to cover page

1. First carry out operations 1 to 8 above, then:
2. Press ( ) once to select AUTO STORE then press ( ). The search begins. After several minutes, the INSTALL menu Reappears Automatically.
3. If the transmitter or the cable network broadcasts the automatic sort signal, the programmes will be correctly numbered.
4. If not, the programmes found will be numbered in descending order starting at 99, 98, 97, etc.
- Use the SORT menu to renumber them. Some transmitters or cable networks broadcast their own sort parameters (region, languages, etc.). Where this is the case, make your choice using the ( ) keys And confirm with ( ). To exit or interrupt the search, press the MENU key.
5. To exit from the menus, press ( ).

8 180MT10P LMT

Go to cover page

### Sorting programmes

1. Press MENU key. The main menu is displayed.
2. Select INSTALL ( ), then press ( ). The INSTALL menu appears.



3. Using the ( ) key, select SORT then press ( ). The SORT menu appears. The FROM option is activated.

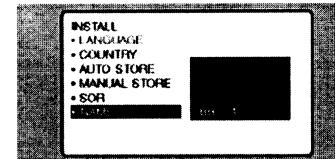
Note: this menu works as follows: Change "FROM" (enter the current programme number), "TO" (enter the new Number), "EXCHANGE numbers" (the operation is carried out).

4. Select the programme you wish to renumber using ( ) Keys or 0 to 9.
- Example: to renumber programme 78 as 2 press 7, 8.
5. Select TO (using ( ) key) and enter the new number with ( ) Keys or 0 to 9 (for the example given, enter 2).
6. Select EXCHANGE ( ( ) key) and press ( ). The message EXCHANGED appears, the exchange takes place. In our example, programme 78 is renumbered as 2 (and programme 2 as 78).
7. Select the option FROM ( ( ) key) and repeat stages 4 to 6 as many times as there are programmes to renumber.
8. To exit from the menus, press ( ).

### Programme name

You may, if you wish, give a name to the first 40 programmes (from 1 to 40).

1. Press MENU.
2. Select INSTALL ( ), then press ( ). The INSTALL menu appears.
3. Press ( ) 5 items to select NAME (concealed at the bottom of the screen), then ( ) press ( ). The menu Appears:



4. Select the programme you wish to name using the keys 0, 9 Or - P +.

Note: at the time of installation, the programmes are automatically named when the identification signal is transmitted.

5. Use the keys ( ) to move within the name display area (5 characters).

## TV OSD menus

6. Use ( ) keys to choose the characters.

7. Press MENU when the name has been entered.

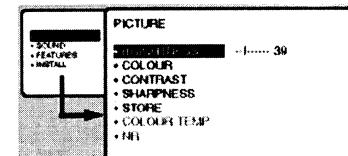
The programme name is stored.

8. Repeat steps 4 to 7 for each programme to be Named.

9. To exit from the menus, press ( ).

### Adjusting the picture

1. Press MENU then ( ). The PICTURE menu Appears:



2. Use ( ) keys to select a setting and ( ) ( ) keys to Adjust.

Note: the menu is a scroll-down menu.  
Keep the key ( ) held down to access the settings hidden at the bottom of the screen.

3. Once the necessary adjustments have been made, select the option STORE and press ( ) to store them.
4. To exit from the menus, press ( ).

### Description of the settings:

BRIGHTNESS: alters the brightness of the image.

COLOUR: alters the colour intensity.

CONTRAST: alters the variation between light and dark tones.

SHARPNESS: alters the crispness of the image.

STORE: stores the picture settings.

COLOUR TEMP (colour temperature): adjusts the colour temperature of the picture. Three options are available here: COOL (blue white), NORMAL (balanced) or WARM (red white). NR (Noise Reduction): alleviates fuzziness (snowy picture). This setting is useful when reception is Difficult.

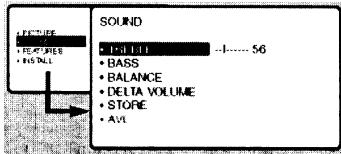
ACTIVE CONTROL (only available on certain versions): optimizes the quality of the picture according to the quality of reception. This adjustment is in the OPTIONS menu.

## TV OSD Menus

180MT10P LMT 9  
◀ Go to cover page

### Adjusting the sound

- 1.Press MENU, select the SOUND option ( ) and press . The SOUND menu appears:



- 2.Use keys to select a setting and keys to Adjust.

Note: to access the AVL setting (hidden at the bottom of the screen) hold down key.

- 3.Once the necessary adjustments have been made, Select the option STORE and press to store them.

- 4.To exit from the menus, press .

### Description of the settings:

TREBLE: alters the level of the high frequency sound.

BASS: alters the level of the low frequency sound.

BALANCE: to balance the sound between the left and right speakers.

DELTA VOLUME (volume difference): allows you to compensate for the volume differences between the different programmes or the EXT sockets. This setting is available for programmes 1- 40 and the EXT Sockets.

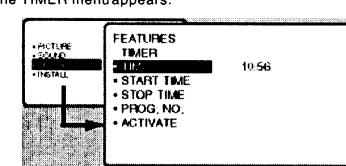
STORE: stores the sound settings.

AVL (Automatic Volume Leveller): automatic volume control used to avoid sudden increases in volume, particularly when changing programmes or during Advertisements.

### Timer function

This menu allows you to use your TV as an alarm Clock.

- 1.Press MENU.
- 2.Select FEATURES ( ), and press twice.



- 3.Press to enter and exit the sub-menus and use Keys to adjust:

- 4.TIME: enter currenttime. Note: the time is updated automatically each time the set is switched on using teletext information taken from programme 1. If programme 1 does not have teletext, the update will not take place.
- 5.START TIME: enter the start time.
- 6.STOP TIME: enter the stop time.
- 7.PROG; NO.: enter the number of the programme Required.
- 8.ACTIVATE: you can set the alarm to be activated: ONCE ONLY for a one-off alarm, DAILY for a daily alarm or STOP to cancel.
- 9.Press to set the TV to standby. It will automatically switch on at the time programmed. If you leave the TV switched on, it will only change programme at the time indicated.

The combination of the CHILD LOCK and TIMER functions may be used to limit the length of time your television is in use, for example, by your children.

10 180MT10P LMT  
◀ Go to cover page

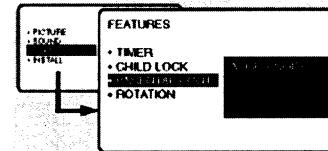
## TV OSD menus

### Locking the set

You can bar access to certain programmes or completely lock the set by locking the keys.

#### Locking programmes

- 1.Press MENU.
- 2.Select FEATURES ( ) and press .
- 3.Select PARENTAL. CONT.( ) and press .



- 4.Enter your confidential access code. The first time, enter the code 0711 then confirm by re-entering 0711. The menu appears.

- 5.Press to go into the menu.

- 6.Use keys to select the required programme and confirm With . The symbol is displayed alongside the programmes or sockets that have been locked.

- 7.Press to exit.

To watch a programme which has been locked you will now need to enter the confidential code; otherwise the screen will remain blank. The INSTALL menu access is also locked.

Caution: in the case of encrypted programmes which use an external decoder, it is necessary to lock the corresponding EXT socket.

#### To unlock all programmes

Repeat stages 1 to 4 above, then select CLEARALL and press .

#### To change the confidential code

Repeat stages 1 to 4 above, then:

- 5.Select CHANGE CODE and enter your own 4-digit Number.

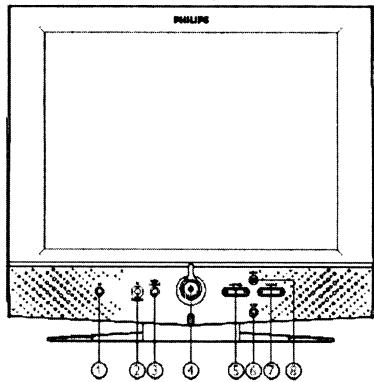
- 6.Confirm by entering it again. Your new code will be stored.

- 7.Press to exit from the menus.

If you have forgotten your confidential code, enter the universal code 0711 twice.

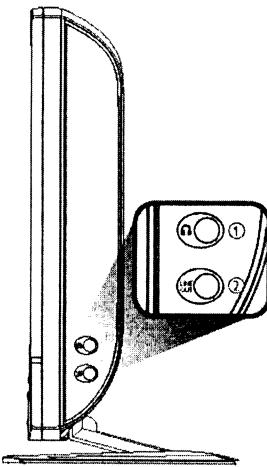
## Description of Controls

### Front View Product Description

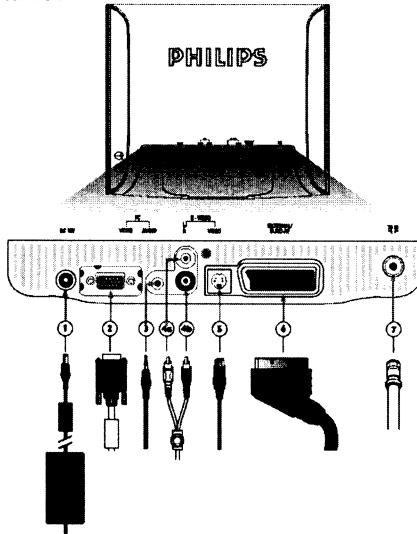


- 1 **PIP** Activate PIP (Picture in Picture) window and select size
- 2 **PC->TV/Video** Switch the monitor between PC mode and TV/Video mode
- 3 **VIDEOSOURCE** TV/Video source selection
- 4 **Power switch On/Off**
- 5 **▼▲** Increase or decrease the channel number Or up or down the highlighted function in OSD
- 6 **AUTO** Automatically adjust the H/V position, phase and clock Setting
- 7 **+ -** Increase or decrease the level of audio volume Or decrease or decrease the highlighted function in OSD
- 8  **MENU** OK Open the OSD and select the highlighted function

### Side View



### Rear View



180MT10P LMT 13  
◀ Go to cover page

14 180MT10P LMT  
◀ Go to cover page

## Description of Controls

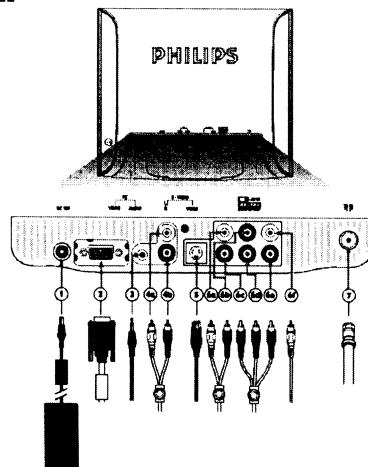
(North America and Asia Pacific)

1. DC 12V DC 12V power in
2. PC - Video D-Sub input
3. PC - Audio PC Stereo input
4. S-VIDEO (L) AV audio (L)  
S-VIDEO AV audio (R)
5. S-VIDEO S-VIDEO in
6. L R - AV IN 6a Audio (L) in  
Y-Pb-Pr 6b Audio (R) in  
Component 6c CVBS in  
6d, e, f Component video in
7. 7.75 Ω TV Antenna or CATV cable in

### Optimizing Performance

For best performance, ensure that your display settings are set at 1024x768@60Hz (for 15") or 1280x1024, 60Hz (for 18").

- (Europe)
1. DC 12V DC 12V power in
  2. PC - Video D-Sub input
  3. PC - Audio PC Stereo input
  4. S-VIDEO (L) AV audio (L)  
S-VIDEO (R) AV audio (R)
  5. S-VIDEO S-VIDEO in
  6. EXTERNAL/EURO-AV SCART connection (for Europe only)
  7. 7.75 Ω TV Antenna or CATV cable in

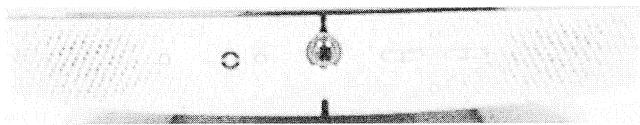


# CLOCK & PHASE Adjustments

150MT10P LMT 15

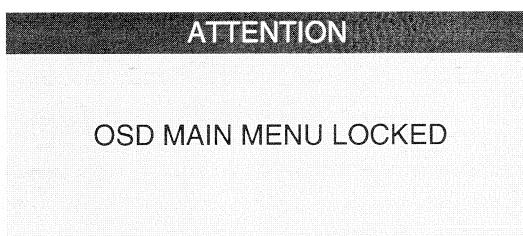
◀ Go to cover page

## Front control panel

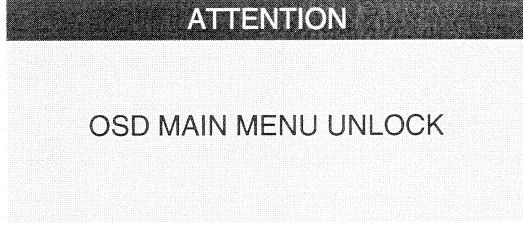


## To Lock/Unlock OSD function

The OSD function can be locked by pressing **OK** button for more than 10 seconds, the screen shows following window for 3 seconds. Everytime when you press **OK** Or **AUTO** button, this message Appears On the screen automatically. The **▲ & ▼ (CHANNEL)**, **+ & - (VOLUME)** hotkey are still functional for CHANNEL and VOLUME expectively while OSD locked.

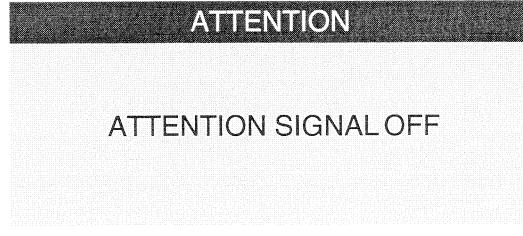


Locked OSD function can be released by pressing **OK** button for more than 10 seconds. While press **OK** button for OSD unlocked purpose, the screen will keep showing OSD MAIN MENU LOCKED until OSD function unlocked and screen automatically shows following window for 3 seconds.

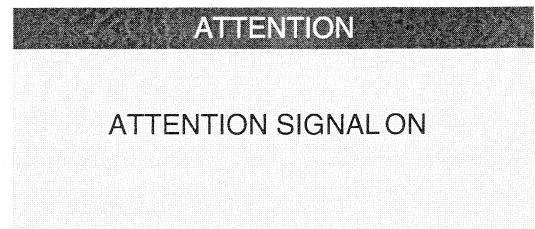


## Switch ON/OFF attention signals

All attention signals can be switched off by keep pressing **AUTO** button for more than 10 seconds if there is no video signal supplied.

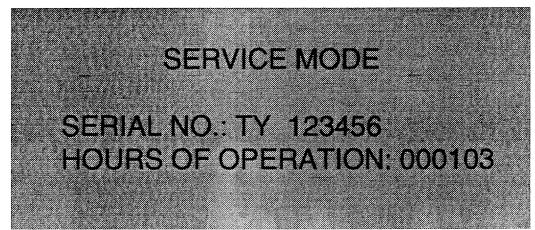


Recover attention signals by pressing **AUTO** button for more than 10 seconds without video signal input.



## Access Service Mode

Operating monitor with no signals (power saving mode), keep pressing **OK** button for more than 10 seconds. Following information will appear on the screen. Leave service mode by either re-feed video signal or simply turn off and on the power of monitor.



## Access Factory Mode

To hold **OK** And **AUTO** buttons then power on the monitor. Press **OK** to bring up OSD menu for confirmation as below:



In the factory mode, once video signal removed, a full white pattern will be display on the screen as Fig.1 in stead of power saving mode. In other words, the power saving function will be disable in the factory mode.



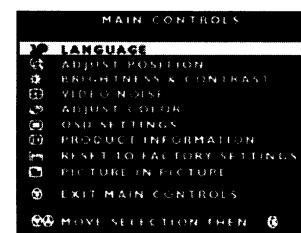
Fig. 2

Fig.1

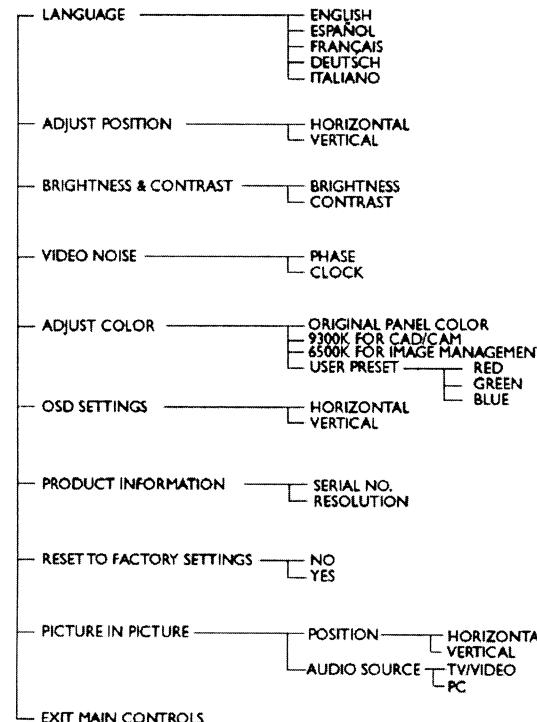
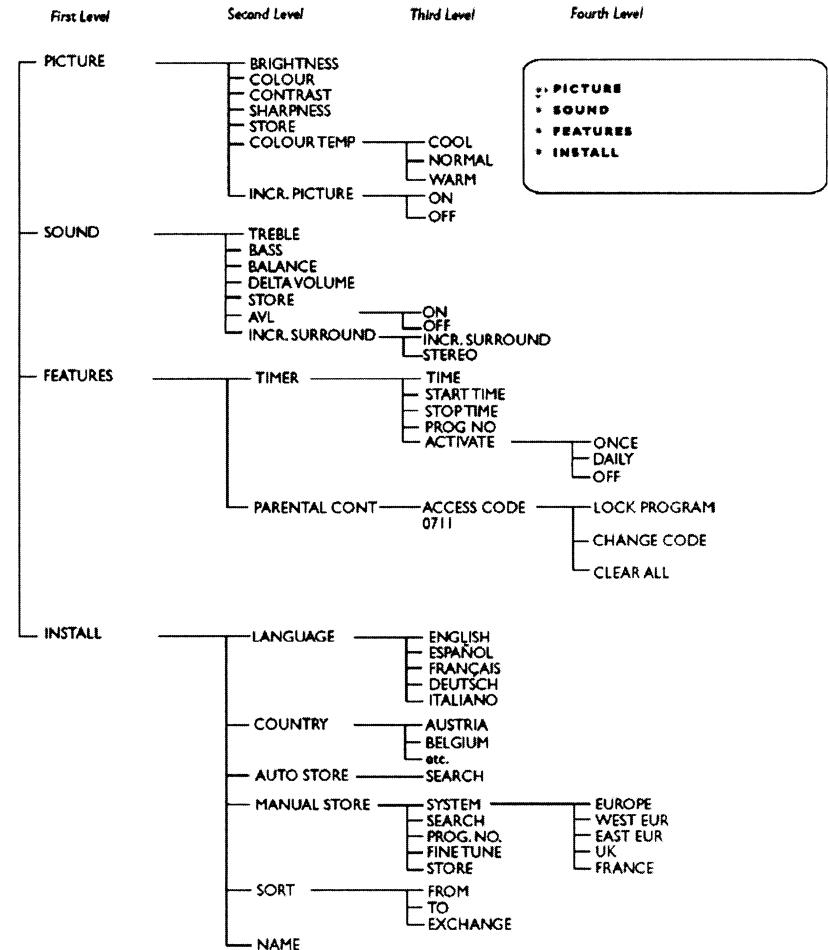
**OSD Control structure**[Go to cover page](#)**The OSD Tree**

Below is an overall view of the structure of the On-Screen Display. You can use this as reference when you want to later on work your way around the different adjustments.

- In PCMode:

**In PC mode**

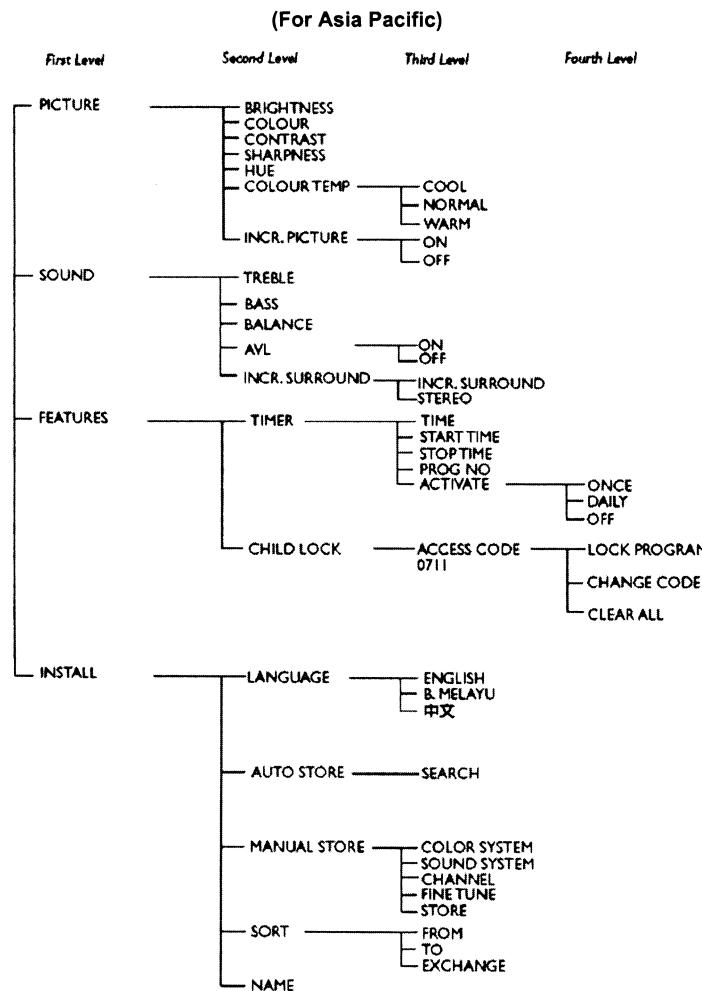
**First Level**                    **Second Level**

**OSD Control structure**[Go to cover page](#)**In TV/Video Mode****(For Europe)**

\* Specifications are subject to change without prior notice.

\* Specifications are subject to change without prior notice.

## OSD Control structure

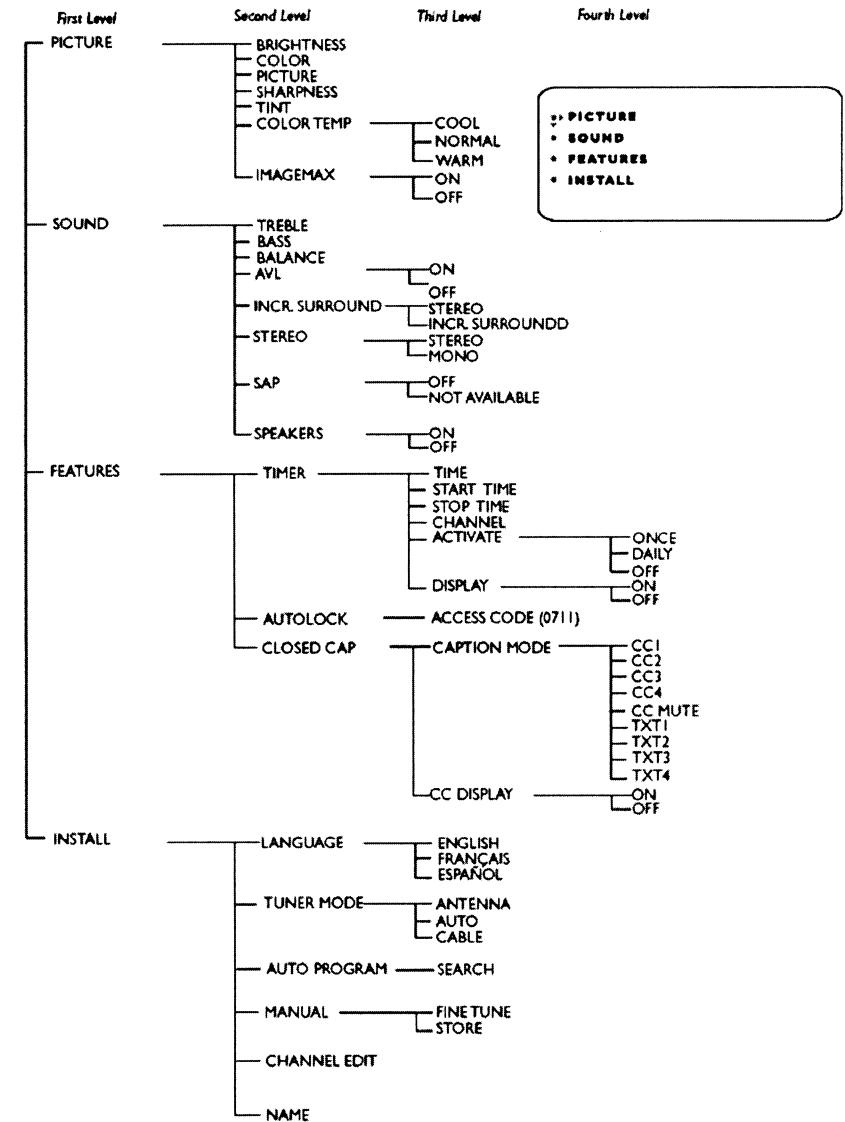


\* Specifications are subject to change without prior notice.

## OSD Control structure

In TV/Video Mode

**(For NTSC system: North America, Philippine, Taiwan and Korea)**



\* Specifications are subject to change without prior notice.

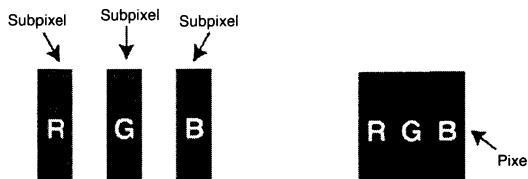
# Definition of Pixel Defects

## 0. General

This section explains the different types of pixel defects and defines acceptable defect levels of each type. In order to qualify for repair or replacement under warranty, the number of pixel defects on a TFT LCD panel must exceed these acceptable levels.

## 1. Definition of Pixels and Subpixels

A pixel, or picture element, is composed of three subpixels in the primary colors of red, green and blue. Many pixels together form an image. When all subpixels of a pixel are lit, the three colored subpixels together appear as a single white pixel. When all are dark, the three colored subpixels together appear as a single black pixel. Other combinations of lit and dark subpixels appear as single pixels of other colors.



## 2. Types of Pixel Defects

Pixel and subpixel defects appear on the screen in different ways.

### Bright dot defects

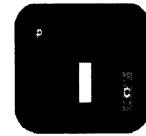
Bright dot defects appear as pixels or subpixels that are always lit or "On". These are the types of bright dot defects:

One lit red, green or blue subpixel



Two adjacent lit subpixels:

- Red + Blue = Purple
- Red + Green = Yellow
- Green + Blue = Cyan (Light Blue)



Three adjacent lit subpixels  
(One white pixel)



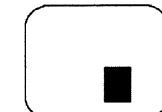
### Black dot defects

Black dot defects appear as pixels or subpixels that are always dark or "off". These are the types of black dot defects:

One dark subpixel



Two or three adjacent dark subpixels



## 3. Pixel Defect Tolerances

In order to qualify for repair or replacement due to pixel defects during the warranty period, a TFTLCD panel in a PHILIPS flat panel monitor must have pixel or subpixel defects exceeding the tolerances listed in the following tables.

BRIGHT DOT DEFECTS	ACCEPTABLE LEVEL	
MODEL	150MT	180MT
1 lit subpixel	4 or fewer	3 or fewer
2 adjacent lit subpixels	2 or fewer	2 or fewer
3 adjacent lit subpixels (one white pixel)	0	0
Distance between two bright dot defects*	15 mm or more	15 mm or more
Bright dot defects within 20 mm circle	3 or fewer	-
Total bright dot defects of all types	4 or fewer	3 or fewer

BLACK DOT DEFECTS	ACCEPTABLE LEVEL	
MODEL	150MT	180MT
1 dark subpixel	4 or fewer	3 or fewer
2 adjacent dark subpixels	2 or fewer	2 or fewer
3 adjacent dark subpixels	0	0
Distance between two black dot defects*	15 mm or more	15 mm or more
Black dot defects within 20 mm circle*	3 or fewer	-
Total black dot defects of all types	4 or fewer	3 or fewer

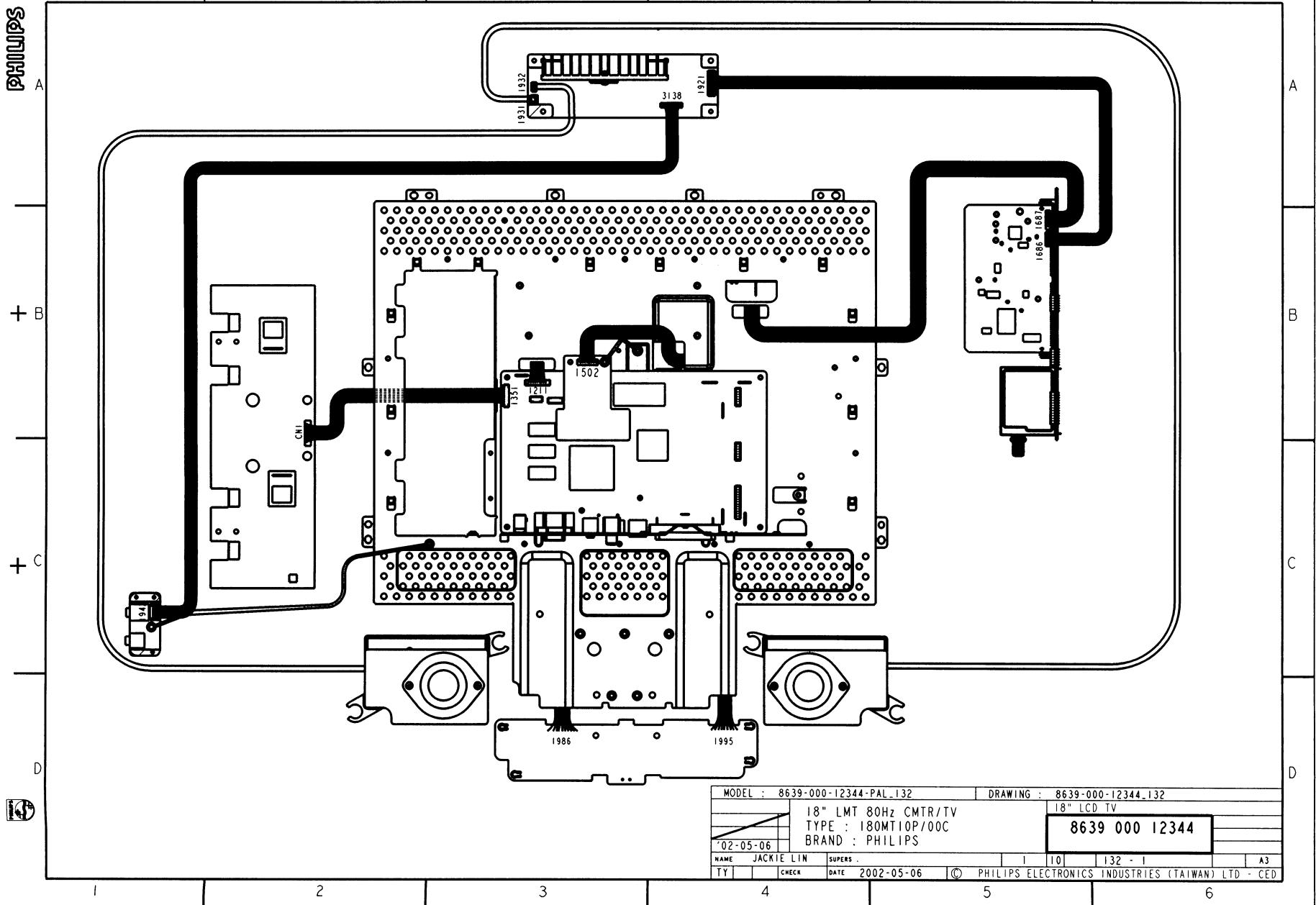
TOTAL DOT DEFECTS	ACCEPTABLE LEVEL	
MODEL	150MT	180MT
Total bright or black dot defects of all types	4 or fewer	6 or fewer

Note: 1 or 2 adjacent subpixel defects = 1 dot defect

# Wiring Diagram

180MT10P LMT  
21

◀ Go to cover page



## Electrical instructions

180MT10P LMT 25  
◀ Go to cover page

### 0. General

When carry-out the electrical settings in many cases a video signal must be applied to the monitor. A computer with :

- ATI VGA 1024 V6-1.04/PHBETA4 interface card
- PGA 1024 (4822 212 30916), Mach 8.
- PGA 1280 (4822 212 30917), Mach 32.
- ATIGP1-1600 (4822 397 10065), Mach 64 (up to 107kHz)

are used as the video signal source. The signal patterns are selected from the "service test software" package, see user guide 4822 727 19896 (ATI1024), or 4822 727 20273 (PGA 1280), or 4822 727 21046 (GPT-1600).

#### 0.1 With normal VGA card:

If not using the ATI card during repair or alignment, The service engineer also can use this service test software adapting with normal standard VGA adaptor and using standard VGA mode 640 x 480, 31.5 kHz/60Hz (only) as signal source.

#### 0.2 AC/DC Measurement:

The measurements for AC waveform and DC figure is based on 1024 x 768 48kHz/60 Hz resolution mode with test pattern "32 gray scale".

Power input: 110V AC

#### 1.General points

1.1 During the test and measuring, supply a distortion free AC mains voltage to the apparatus via an isolated transformer with low internal resistance.

1.2 All measurements mentioned hereafter are carried out at a normal mains voltage (90 - 132 VAC for USA version, 195 - 264 VAC for EUROPEAN version, or 90 - 264 VAC for the model with full range power supply, unless otherwise stated.)

1.3 All voltages are to be measurement or applied with respect to ground, unless otherwise stated. Note: don't use heat-sink as ground.

1.4 The test has to be done on a complete set including LCD panel in a room with temperature of 25 +/- 5 degree C.

1.5 All values mentioned in these test instruction are only applicable of a well aligned apparatus, with correct signal.

1.6 The letters symbols (B) and (S) placed behind the test instruction denotes

(B): carried out 100% inspection at assembly line  
(S): carried out test by sampling

1.7 The white balance (color temperature), has to be tested in subdued lighted room.

1.8 Repetitive power on/off cycle are allowed except it should be avoided within 6 secretary.

#### 2. Input signal

##### 2.1.1 Signal type

Video : 0.7 Vp-p linear, positive polarity  
Sync. : TTL level, separate, positive or negative polarity  
Signal source: pattern generator format as attachment.  
(table 1 to 17) Reference generator: CHROMA 2200 or 2250

##### 2.1.2

RF Signal : Aerial input

Video signal: SCART input (Europe mode only)

Cinch input (NAFTA, AP mode only)

S video input

Audio signal : for S-terminal L/R audio input

PC line in

Audio Line out

#### 2.2 PC Input signal mode

## Factory preset video resolution

Dot rate (MHz)	H.freq (KHz)	Mode	Resolution	V.freq (Hz)
25.175	31.469	IBM VGA 10h	640 * 350	70.087
28.322	31.469	IBM VGA 3h	720 * 400	70.087
25.175	31.469	IBM VGA 12h	640 * 480	59.940
30.240	35.000	MACINTOSH	640 * 480	66.667
31.500	37.861	VESA	640 * 480	72.809
31.500	37.500	VESA	640 * 480	75.000
36.000	35.156	VESA	800 * 600	56.250
40.000	37.879	VESA	800 * 600	60.317
50.000	48.077	VESA	800 * 600	72.188
49.500	46.875	VESA	800 * 600	75.000
57.300	49.700	MACINTOSH	832 * 624	75.000
65.000	48.363	VESA	1024 * 768	60.004
75.000	56.476	VESA	1024 * 768	70.069
78.750	60.023	VESA	1024 * 768	75.029
100	68.681	MACINTOSH	1152 * 870	74.979
108	63.981	VESA	1280 * 1024	60.020
135	79.976	VESA	1280 * 1024	75.024

## 2.3 TV input signal Channel and pattern

### 2.3.1 Table 1 for NAFTA version

#### Signal Distribution Table (NTSC Cable)

PRG	CH	Frequency Carriers		TV System	Pattern
		Video	Sound		
1	A .03	61.25MHz	65.75MHz	NTSC M	Color Circle
2	A .06	83.25MHz	87.75MHz	NTSC M	Red Raster
3	A .09	187.25MHz	191.75MHz	NTSC M	Circle Pattern
4	A .11	199.25MHz	203.75MHz	NTSC M	Cross Hatch
5	A .13	211.25MHz	215.75MHz	NTSC M	Two White Window
6	C .70	499.25MHz	503.75MHz	NTSC M	Checkerboard
7	A .52	699.25MHz	703.75MHz	NTSC M	Color Bar
8	A .69	801.25MHz	805.75MHz	NTSC M	100% White

Table 1

26 180MT10P LMT  
◀ Go to cover page

## Electrical instructions

### 2.3.2 Table2 for Europe and AP-multi Signal Distribution Table (PAL Cable)

PRG	CH	Frequency Carriers		TV System	Pattern
		Video	Sound		
0					
1	AU37	590.25MHz	595.75MHz	PAL B(UK)	Pure White
2	AU2	64.25MHz	69.75MHz	PAL B(UK)	Circle Pattern
3	E7	189.25MHz	194.75MHz	PAL B (CCIR)	Circle Pattern
4	G47	679.25MHz	684.75MHz	PAL G (CCIR)	Circle Pattern
5	I23	487.25MHz	493.75MHz	PAL I (UK)	Circle Pattern
6	E12	224.25MHz	229.75MHz	PAL B (CCIR)	Color Bar
7	AU7	182.25MHz	187.75MHz	PAL B (UK)	Color Bar
8	G68	847.25MHz	852.75MHz	PAL G (CCIR)	100% White
9	AU9	196.25MHz	201.75MHz	PAL B (UK)	Checkerboard
10	AU10	209.25 MHz	214.75 MHz	PAL B (UK)	Crosshatch
11	AU0	46.25MHz	51.75MHz	PAL B (UK)	Color Bar
12	AU2	64.25MHz	69.75MHz	PAL B (UK)	Color Bar
13	AU5	102.25 MHz	107.75 MHz	PAL B (UK)	Crosshatch
14	AU5A	138.25MHz	143.75MHz	PAL B (UK)	Color Bar
15	AU7	182.25MHz	187.75MHz	PAL B (UK)	Pure White
16	AU9	196.25MHz	201.75MHz	PAL B (UK)	Pure White
17	AU10	209.25MHz	214.75MHz	PAL B (UK)	Circle Pattern
18	I23	487.25MHz	493.75MHz	PAL I (UK)	Circle Pattern
19	G28	527.25MHz	532.75MHz	PAL G (CCIR)	Circle Pattern
20	AU37	590.25MHz	595.75MHz	PAL G (UK)	Circle Pattern
21	I40	623.25MHz	629.75MHz	PAL I (UK)	Color Bar
22	CH44	655.25MHz	661.75MHz	PAL DK (UK)	Color Bar
23	I60	783.25MHz	789.75MHz	PAL I (UK)	100% White
24	I66	831.25MHz	837.75MHz	PAL I (UK)	Checkerboard
25	K21	471.25 MHz	477.75 MHz	SKC KJ (CCIR)	Crosshatch
26	G28	527.25MHz	532.75MHz	PAL G (UK)	Color Bar

Table 2

### 3.AC adaptor

- 3.1 Setup the AC1/P at 90VAC, and Output DC loading at 4.5Amp.
- The DC output voltage is 12.1V DC
- 3.2 Adjustment nothing to do

### 4.PC mode Display Adjustment

#### 4.1Display quality adjustment

Use timing mode as describe in 2.2, and use the POPO (pixel on pixel off) pattern to adjust the clock until no stripe and adjust the phase until clear picture.

Check all pre-setting 140 modes.

#### 4.2 WHITE-D adjustment (B)

- 4.2.1At factory mode apply 60KHz/75Hz mode with crosshatch pattern .
- Set main controls brightness control at 100% and contrast to 50%. Set auto-sub-function for auto offset and sub-con setup

#### 4.2.2Apply white pattern, set brightness control at 100%, and contrast control at 50%. Preset R,G,B gain at 127.

Adjust the R,G,B gain of Scalarin Factory Mode. (see Fig 1.) The 1931 CIE chromaticity (X, Y) co-ordinates shall be:

9300K	6500K
x (center) 0.281 0.005	0.312 0.005
y (center) 0.311 0.005	0.338 0.005

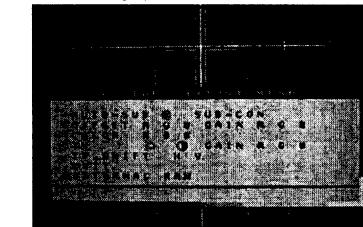
Use Minolta CA-110 for color coordinates and luminance Check.

Luminance> 250 Nits ( CPT ) in the center of the screen at Original color and PC Brightness control ;Contrast control at 100%

Note : After white-D adjustment set brightness and contrast at 50%

#### 4.3 Check the digital interface cable

Check the 64 grey level color poor & noise condition.



### 5.0 TV Mode display adjust

#### 5.1.Geometry Adjustment (B)

##### A )INPUT REQUIREMENTS

- Equipment :PM5515, PM5518 or FLUKE 54200  
Input Signal Type :1.1 for RF input signal  
within PAL system (for Europe and AP version) , channel : E7 (189.25MHz) the pattern is using circle and cross hatch pattern  
2. for S-Video input signal, within NTSC system (for Europe and AP version) , the pattern is using Circle and cross hatch pattern

input Signal Strength :>= 1mV rms (60 dBuV) terminal Voltage,  
1Vpp Y-signal , 300mVpp C-signal

Input Injection Point :Aerial input and S- Video input

##### B ) ALIGNMENTMETHOD

- Initial Set-up : Set smartpicture to Natural.
- a. select to TV channel , then adjust vertical shift .and horizontal shift to picture center then save .
- b. select to S-video Adjust vertical shift .and horizontal shift to picture center then save .
- c. Left space - Right space < 10 mm

## Electrical instructions

180MT10P LMT 27

Go to cover page

### 5.1.2 White balance adjustment (B)

#### A) GENERAL SET-UP

Equipment Requirements : Colour analyzer.

#### B) INPUT REQUIREMENTS

Input Signal Type : RF signal, modulated with white Pattern  
Input Signal Strength : >= 10mV rms (80 dBuV) terminal voltage.  
Input Injection Point : Aerial input

#### C) ALIGNMENT METHOD

Initial Set-up : After PC White D adjust  
Set color to original color  
Set TV Brightness = 122 ; Contrast=64  
in Factory mode(can be fine tuned)  
Set smart picture to Natural (Europe , AP model)  
Set Color Temp to Normal  
Select COLOR TEMP or 100% Full  
White pattern by TV pattern generator

Method of Alignments:  
Adjust TV R,G,B gain  
Adjust TV red , green and blue to the value in the table  
Check the grey level color pool & noise condition if need adjust, please adjust TV Brightness and Contrast in Factory mode..

#### D) EXPECTED RESULTS

Measured Parameters : White balance.  
Specifications : See table.  
Units of Measurement : xy.

#### E) TABLE(S)

: Specifications of white balance

Picture Mode	x	y
Normal (Natural)	300+/- 5	325+/- 5

Table 5.1: Readings with Philips Colour Meter.

### 5.2 VIDEO PROCESSING (Conjunction board A10 alignment)

#### 5.2.1 RF AGC take over point adjustment .

Input : Test lead of item 7681 pin 11 connector through the probe.  
Input signal: IF signal modulated with a Grey scale video signal , video modulation - negative & SoundIF signal (33.4MHz / 31.5MHz / 41.25MHz for picture IF frequencies of 38.9MHz / 38MHz / 45.75MHz respectively), level at 13dB w.r.t. picture IF level, Without modulation (only carrier).

Input Probe : Input via 50 coaxial cable terminated with RC (120.10nF) network at I/P injection point.

Output : pin 1 of tuner connected to a DC voltmeter.  
Set bimos : sub address 27, refer to table below.

Method :  
Via I'C or with a factory remote control, adjust the AGC take over (data byte sub address 1E ,D0-D5) to the step at which the DC voltage should be within 2.5 V AGC takeover voltage 4.6 V. Record the AGC register content and store in the NVROM location 'TOP ', address as specified in the attached 'memory layout' list.

Versions	IF Frequency (MHz)	IF signal level (dBuV)	Value of Sub address 27 of bimos
Europe model	38.9	105	40hex

### 5.2.2 Off-set IF demodulator Adjustment.

Input : Same as RF AGC adjustment.

Input Signal : Same as RF AGC adjustment, with picture IF signal modulated with a cross-hatch video signal instead of greyscale video signal & video level 105% .

Output : Sounddecoder ( device add. 80H /81H for Write/Read ) Read register Quasi-peakreadout left ; SubAdd. 13H ; Reg. 0019H.

Set Sound decoder: 1. DSP write register : Prescale FMAM ; Sub Add.12H ; Reg. 000EH ; Data 7F00H.  
2. DSP write register : Deemphasis FM ; Sub Add.12H ; Reg. 000FH ; Data 3F00H.  
3. DSP write register : Volume loudspeaker channel ; SubAdd.12H ; Reg. 0000H ; Data 7F00H.

Method : Via I2C, adjust the ' Off-set IF demodulator ' ( data byte sub address 05,D0-D5 ) register value of the bimos so as to get the lowest read back value from the sound decoder.

This value of the ' Off-set IF demodulator ' is to be stored in the NVROM locations ' OFFSET\_IF\_NEG ' & ' OFFSET\_IF\_POS ', address as specified in the attached ' memory layout ' list.

# Factory Adjustment

**◀ Go to cover page**

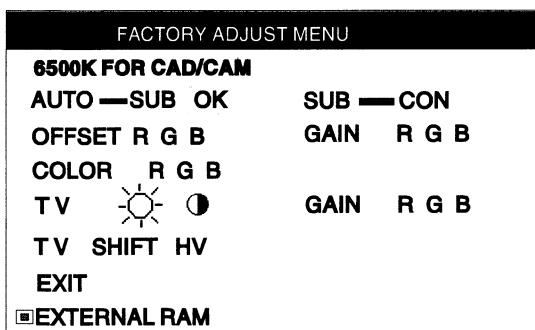
## Factory Mode Adjustment

Entering Factory Adjustment Menu

Push **OK** & **AUTO** buttons then power on the monitor, release them after picture display normally. Press **OK** button to bring up OSD menu of factory mode as shown below.

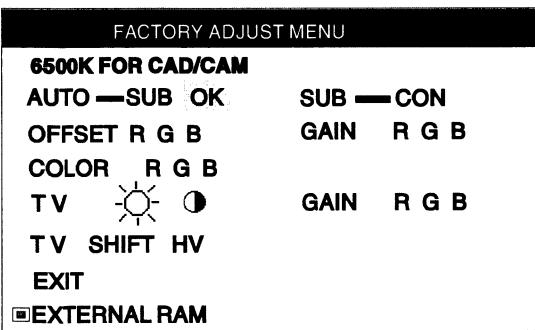


Use **▼** button to select factory adjustment indication (for example: LCD TV V1.28 20011030, which is the entrance of the factory adjustment menu, press **OK** button to access it. The window shows as below.



Use **▲** or **▼** buttons to select SUB-CON, COLOR ,R G B,,etc.  
Use **+ —** or **- +** buttons to decrease/increase the value of each item

**AUTO** : adjust Sub-brightness & Sub-contrast automatically.



Contrast adjustment (Sub-Contrast). Use this menu item to adjust the contrast gain of pre-amp ranges from 0 to 255.

GAIN R G B  
COLOR R G B

Color temperature gain adjustment. Use these menu items to adjust the RGB gains of pre-amp for different color temperatures, ranges from 0 to 255.

OFFSET R G B  
Sub-Brightness adjustment. Use this menu item to adjust the brightness level (DC-level) of pre-amp range from 0 to 255.

(PS: The Offset RG B function can be used on reduce or eliminate snowy noise on the background when the resolution of video signal is 1024 X 768 vertical 60Hz. Slightly increase or decrease the value until snowy noise completely disappear.)

All units that are returned for service or repair must pass the original manufacturers safety tests. Safety testing requires both *Hipot* and *Ground Continuity* testing.

## HI-POT TEST INSTRUCTION

### 1. Application requirements

- 1.1 All mains operated products must pass the Hi-Pot test as described in this instruction.
- 1.2 This test must be performed again after the covers have been refitted following the repair, inspection or modification of the product.

### 2. Test method

#### 2.1 Connecting conditions

- 2.1.1 The test specified must be applied between the parallel blade plug of the mainscord and all accessible metal parts of the product.
- 2.1.2 Before carrying out the test, reliable conductive connections must be ensured and thereafter be maintained throughout the test period.
- 2.1.3 The mains switch(es) must be in the "ON" position.

#### 2.2 Test Requirements

All products should be HiPot and Ground Continuity tested as follows:

Condition	HiPot Test for products where the mains input range is Full range(or 220V AC)	HiPot Test for products where the mains input is 110V AC(USA type)	Ground Continuity Test requirement
Test voltage	2820VDC (2000VAC)	1700VDC (1200VAC)	Test current: 25A,AC Test time: 3 seconds(min.) Resistance required: $\leq 0.09 + R$ ohm, R is the resistance of the mains cord.
Testtime (min.)	3 seconds	1 second	
Trip current (Tester)	set at 100 $\mu$ A for Max. limitation; set at 0.1 $\mu$ A for Min. limitation	5 mA	
Ramp time	set at 2 seconds		

2.2.1 The test with AC voltage is only for production purpose, **Service center shall use DC voltage**.

2.2.2 The minimum test duration for Quality Control Inspector must be 1 minute. No breakdown during the test.

2.2.3 The test voltage must be maintained within the specified voltage  $\pm 5\%$ .

2.2.4 The grounding blade or pin of mains plug must be conducted with accessible metal parts.

### 3. Equipments and Connection

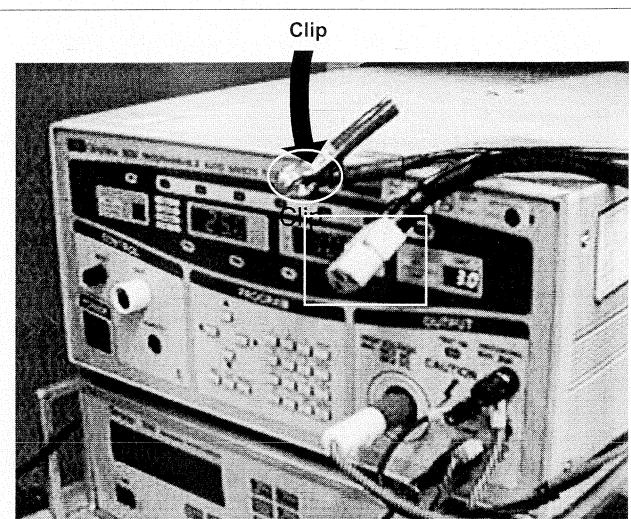
#### 3.1. Equipments

For example :

- ChenHwa 9032 PROGRAMMABLE AUTO SAFETY TESTER
- ChenHwa 510B Digital Grounding Continuity Tester
- ChenHwa 901 (AC Hi-pot test), 902 (AC, DC Hi-pot test) Withstanding Tester

#### 3.2. Connection

- \* Turn on the power switch of monitor before Hipot and Ground Continuity testing.



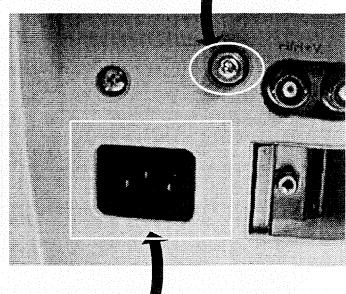
(ChenHwa 9032 tester)



Connect the "video cable" or "grounding screw" to the CLIP on your tester.



Connect the power cord to the monitor.



(Rear view of monitor)

### 4. Recording

Hipot and Ground Continuity testing records have to be kept for a period of 10 years.

Go to cover page

## DDC Instructions

### General

#### DDC Data Re-programming

In case the DDC data memory IC or main EEPROM which storage all factory settings were replaced due to a defect, the serial numbers have to be re-programmed.  
It is advised to re-soldered DDC IC and main EEPROM from the old board onto the new board if circuit board have been replaced, in this case the DDC data does not need to be re-programmed.

#### Additional information

Additional information about DDC (Display Data Channel) may be obtained from Video Electronics Standards Association (VESA). Extended Display Identification Data(EDID) information may be also obtained from VESA.

#### DDC EDID structure

For Analog interface: Standard Version 3.0  
Structure Version 1.2  
For Digital interface: Standard Version 3.0  
Structure Version 1.3

## System and equipment requirements

1. An i486 (or above) personal computer or compatible.
2. Microsoft operation system Windows 95/98.
3. EDID301.EXE program (3138 106 10103) as shown in Fig. 1
4. A/D Alignment kits (3138 106 10079);  
inclusion : a. Alignment box x1 (as Fig. 2)  
b. Printer cable x1  
c. (D-Sub) to (D-Sub) cable x1

Note: The EDID301.EXE (Release Version 1.58 20000818) is a windows-based program, which cannot be run in MS-DOS.

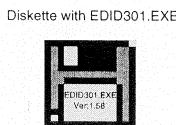


Fig. 1

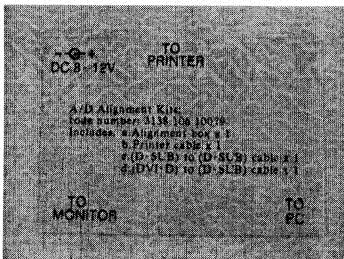
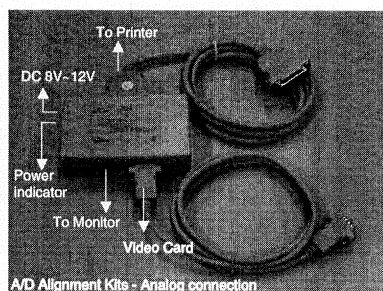
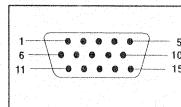


Fig. 2



Note: The alignment box has already build-in a batteries socket for using batteries (9V) as power source. Pull out the socket by remove four screws at the rear of box. Please do not forget that remove batteries after programming. The energy of batteries can only drive circuits for a short period of time.

## Pin assignment



Pin No.	Assignment	Pin No.	Assignment
1	Red video input	9	+5V
2	Green video input	10	Ground
3	Blue video input	11	Ground
4	Ground	12	Serial data line(SDA)
5	No Connected	13	H.Sync
6	Red video ground	14	V.Sync(VCLK for DDC)
7	Green video ground	15	Data clock line(SCL)
8	Blue video ground		

## DDC Instructions (Continued)

Go to cover page

### Configuration and procedure

There are 2 chips contained OSD string, serial number..etc on the circuit board, main EEPROM (7402, 32k) which storage all factory settings, OSD string.DDC IC (7202) which storage 128byte EDID data (serial number ..etc.). Following descriptions are the connection and procedure for Analog DDC application, the main EEPROM can be re-programmed along with Analog IC by enable factory memory data write function on the DDC program (EDID301.EXE).

#### Initialize alignment box

In order to avoid that monitor entering power saving mode due to sync will cut off by alignment box, it is necessary to initialize alignment box before running programming software (EDID301.EXE). Following steps show you the procedures and connection.

- Step 1: Supply 8~12V DC power source to the Alignment box by plugging a DC power cord or using batteries.
- Step 2: Connecting printer cable and video cable of monitor as Fig. 3 Rear view of 150MT10P

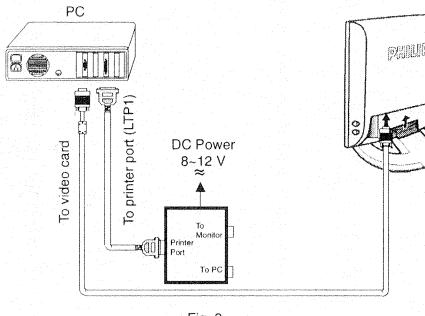


Fig. 3

#### Step 3: Installation of EDID301.EXE

##### Method 1: Start on DDC program

Start Microsoft Windows.

1. Insert the disk containing EDID301.EXE program into floppy disk drive.
2. Click , choose Run at start menu of Windows 95/98 as shown in Fig. 4.

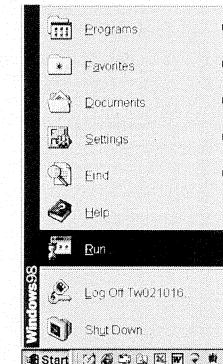


Fig. 4

3. At the submenu, type the letter of your computer's floppy disk drive followed by :EDID301 (for example, A:\EDID301, as shown in Fig. 5).

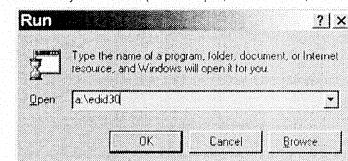


Fig. 5

4. Click OK button. The main menu appears (as shown in Fig. 6). This is for initialize alignment box.

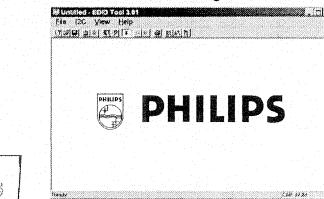


Fig. 6

Note 1: If the connection is improper, you will see the following error message (as shown in Fig. 7) before entering the main menu. Meanwhile, the (read EDID) function will be disable. At this time, please make sure all cables are connected correctly and fixedly, and the procedure has been performed properly.

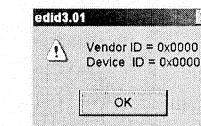


Fig. 7

#### Method 2: After create a shortcut of EDID301.EXE

- : Double click EDID301 icon (as shown in Fig. 8) which is on the screen of Windows Wallpaper. Bring up main menu of EDID301 as shown in Fig. 9. This is for initialize alignment box.

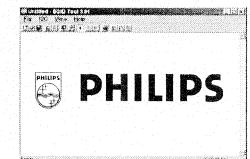


Fig. 8

Note 2: During the loading, EDID301 will verify the EDID data which just loaded from monitor before proceed any further function, once the data structure of EDID can not be recognized, the following error message will appear on the screen as below. Please confirm following steps to avoid this message.

1. The data structure of EDID was incorrect.
2. DDC IC that you are trying to load data is empty.
3. Wrong communication channel has set at configuration setup windows.
4. Cables loose or poor contact of connection.

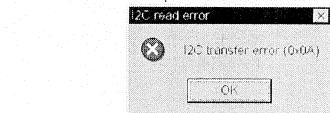


Fig. 9



## DDC Instructions (Continued)

[Go to cover page](#)

## Step 5: Access Factory Mode for DDC data writing

## Factory Mode:

## How to Get into Factory Mode Menu

Push Menu "OK" & "ATUO" buttons simultaneously until picture comes on the screen.  
Press Menu "OK" button, bring up Factory mode indication as shown in Fig 23.

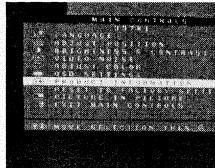


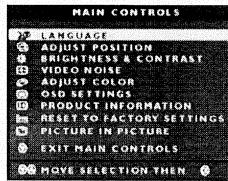
Fig. 23

## Step 6: Write DDC data

1. Click (Write EDID) icon from the tool bar to write DDC data. (0% ~ 100%, -> READY)
2. Click (Read EDID) to re-confirm it.

## Step 7: Reconfirm Monitor Serial Number in User Mode

1. Go back to USER Mode as shown in Fig. 24 : Turn off monitor, then turn on monitor again => leave factory mode and return to User Mode directly.



User Mode Fig. 24

2. Select "Product information" => Press "OK" button  
>> Bring up Fig. 25.

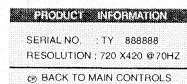


Fig. 25

3. To match with the serial number modification on EEPROM(OSD)  
See page 116~117.

## Step 8: Save DDC data

Sometimes, you may need to save DDC data as a text file for using in other IC chip. To save DDC data, follow the steps below:

1. Click (Save) icon (or click "file-> save as") from the tool bar and give a file name as shown in Fig. 26.  
The file type is EDID30 file (\*.ddc) which can be open in WordPad. By using WordPad, the texts of DDC data & table (128 bytes hex code) can be modified. If DDC TEXTS & HEX Table are completely correct, it can be saved as .ddc file to re-load it into DDC IC & EEPROM for DDC Data application.

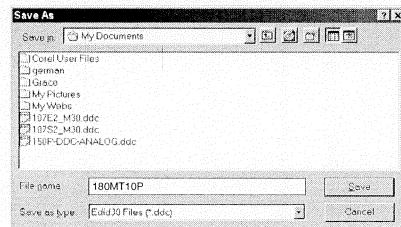


Fig. 26

2. Click Save.

## Step 9: Load DDC data

1. Click from the tool bar.
2. Select the file you want to open as shown in Fig. 27.
3. Click Open.

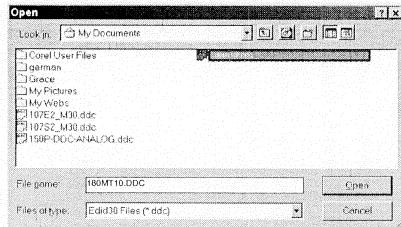


Fig. 27

## Step 9: Exit DDC program

Pull down the File menu and select Exit as shown in Fig. 28.

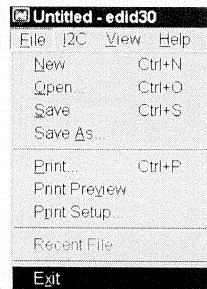


Fig. 28

## DDC data of Analog

180MT10P LMT 35

[Go to cover page](#)

### THE DISPLAY DATA CHANNEL ( DDC 2B ) CONTENT (FOR 180MT10P/00C LCD Monitor / TV)

\*\*\*\*\*  
EDID log file

\*\*\*\*\*  
Vendor/Product Identification

ID Manufacturer Name : PHL  
ID Product Code : 0022 (HEX.)  
ID Serial Number : 1E240 (HEX.)  
Week of Manufacture : 25  
Year of Manufacture : 2002

EDID Version, Revision  
Version : 1  
Revision : 3

#### Basic Display Parameters/Features

Video Input Definition : Analog Video Input  
0.700V/0.000V (0.70Vpp)  
without Blank-to-Black Setup  
Separate Sync  
Composite Sync  
without Sync on Green  
no Serration required

Maximum H Image Size : 36  
Maximum V Image Size : 29

Display Transfer Characteristic : 2.7  
(Gamma)

Feature Support (DPMS): Standby  
Suspend  
Active Off

Display Type : RGB color display

Color Characteristics  
Red X coordinate : 0.63  
Red Y coordinate : 0.34  
Green X coordinate : 0.28  
Green Y coordinate : 0.61  
Blue X coordinate : 0.14  
Blue Y coordinate : 0.09  
White X coordinate : 0.281  
White Y coordinate : 0.311

Established Timings  
Established Timings I : 720x400 @70Hz (IBM,VGA)  
640x480 @60Hz (IBM,VGA)  
640x480 @67Hz (Apple,Mac II)  
640x480 @72Hz (VESA)  
640x480 @75Hz (VESA)  
800 x 600 @56Hz (VESA)  
800 x 600 @60Hz (VESA)

Established Timings II : 800x600 @72Hz(VESA)  
800 x 600 @75Hz (VESA)  
832 x 624 @75Hz (Apple,Mac II)  
1024 x 768 @60Hz (VESA)  
1024 x 768 @70Hz (VESA)  
1024 x 768 @75Hz (VESA)  
1280 x1024 @75Hz(VESA)

Manufacturer's timings: 1152 x 870 @ (Apple , Mac II)

Standard Timing Identification #1  
Horizontal active pixels:1280  
Aspect Ratio : 5:4  
Refresh Rate : 60

#### Detailed Timing #1

Pixel Clock (MHz) : 25.18  
H Active (pixels) : 640  
H Blanking (pixels) : 160  
V Active (lines) : 350  
V Blanking (lines) : 99  
H Sync Offset (F Porch)(pixels): 16  
H Sync PulseWidth (pixels) : 96  
V Sync Offset (F Porch)(lines) : 37  
V Sync PulseWidth (lines): 2  
H Image Size(mm) : 306  
V Image Size(mm) : 230  
H Border (pixels) : 0  
V Border (lines) : 0  
Flags : Non-interlaced  
Normal Display, No stereo  
Digital Separate sync.  
Negative Vertical Sync.  
Negative Horizontal Sync.

#### Monitor Descriptor #2

Serial Number : TY 123456

#### Monitor Descriptor #3

Monitor Name : PHILIPS 180MT

#### Monitor Descriptor #4

Monitor Range Limits  
Min. Vt rateHz : 56  
Max. Vt rateHz : 75  
Min. Horiz. ratekHz : 30  
Max. Horiz. ratekHz : 80  
Max. Supported Pixel : 140

No secondary GTFTiming formula supported.

Extension Flag : 0

Check sum : 7A (HEX.)

#### EDID data (128bytes)

```
0:00 1:ff 2:ff 3:ff 4:ff 5:ff 6:ff 7:00
8:41 9:0c 10:21 11:00 12:40 13:e2 14:01 15:00
16:19 17:0c 18:01 19:03 20:6c 21:24 22:1d 23:aa
24:e8 25:4d 26:c2 27:a1 28:57 29:47 30:9c 31:23
32:17 33:48 34:41 35:b1 36:ef 37:80 38:81 39:80
40:01 41:01 42:01 43:01 44:01 45:01 46:01 47:01
48:01 49:01 50:01 51:01 52:01 53:01 54:06 55:09
56:80 57:a0 58:20 59:5e 60:63 61:10 62:10 63:60
64:52 65:08 66:32 67:e6 68:10 69:00 70:00 71:18
72:00 73:00 74:00 75:ff 76:00 77:20 78:54 79:59
80:20 81:20 82:31 83:32 84:33 85:34 86:35 87:36
88:0a 89:20 90:00 91:00 92:00 93:fc 94:00 95:50
96:48 97:49 98:4c 99:49 100:50 101:53 102:20 103:31
104:38 105:30 106:4d 107:54 108:00 109:00 110:00 111:fd
112:00 113:38 114:4b 115:1e 116:50 117:0e 118:00 119:0a
120:20 121:20 122:20 123:20 124:20 125:20 126:00 127:7a
```

\*\*Note1: Address 78&79 is Factory code

## Serial number modification - EEPROM (OSD)

When the serial number inside DDC IC has been changed, the serial number inside EEPROM (in User mode, the serial number of monitor can be found by OSD as shown in Fig. 1 also.) should be changed at the same time.

### Serial number modification in EEPROM (near CPU) for On Screen Display (Factory mode & User mode)

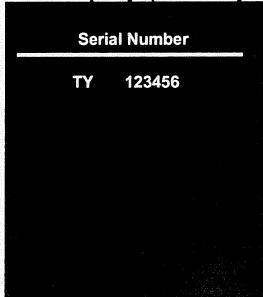


Fig. 1

Due to different communication structures were implemented for DDC IC and EEPROM (serial number) application as below.

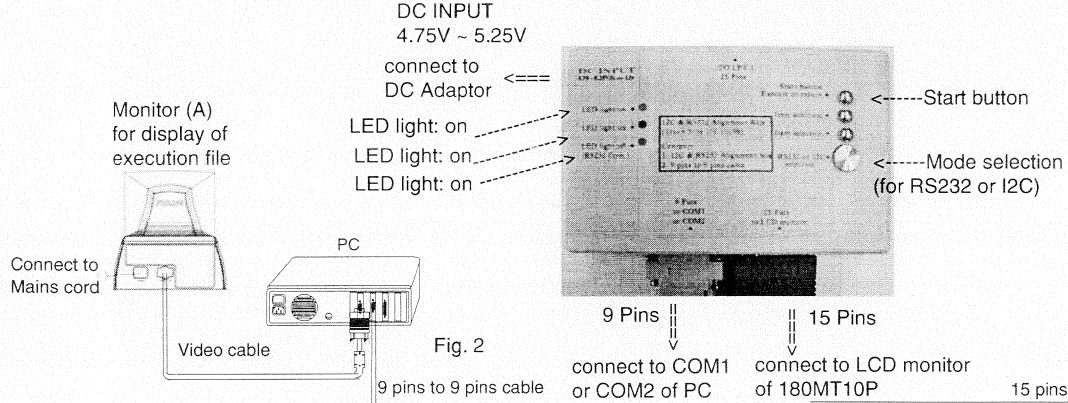
(15pin D-SUB) ----- CPU ----- DDC IC  
I2C I2C

(15pin D-SUB) ----- CPU ----- EEPROM (OSD -> Serial number)  
RS232 I2C

Update/Modify the serial number of monitor as shown in Fig. 1, please follow the steps as below.

#### 1. connection of RS232 COMMUNICATION as shown in Fig. 2

#### CONNECTION OF RS232 COMMUNICATION



I2C & RS232 Alignment Kits  
(12nc = 3138 106 10198)

#### Contents :

1. I2C & RS232 Alignment box
2. 9 pins to 9 pins cable

- Connect DC adaptor (**4.75 ~ 5.25Vdc**) to Alignment box.  
3 LED light should be at ON status at this moment.
- Connect 9 pins cable
- Connect 15pins D-SUB between Monitor and Alignment box.

Bring up Fig. 3



Fig. 3

- Press button1, the Red LED light should be at OFF status at this moment.

Bring up Fig.5.

(If it is not at RS232 COMMUNICATION status, Mode selection key can be used for exchange.

For example : RS232 COMMUNICATION, I2C COMMUNICATION)

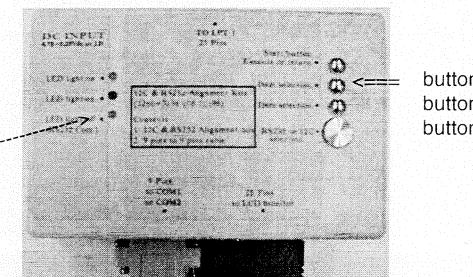


Fig. 4

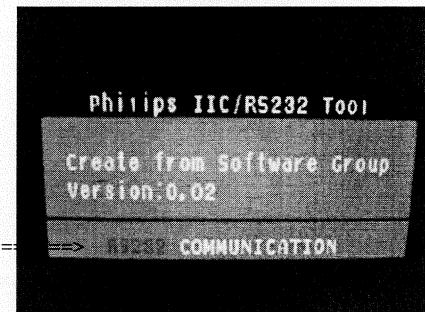


Fig. 5

RS232

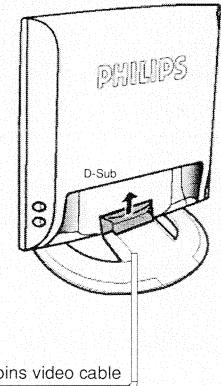


Fig. 6

# Serial number modification - EEPROM (OSD)

180MT10P LMT 37

Go to cover page

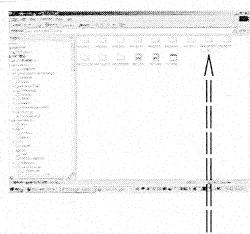


Fig. 7

PHL18HIT.PAL (HIT panel)

The file name of "DDC.HEX" has been defined by source code of DDCRUN.EXE.

The contents of DDC.HEX are different as shown in Fig. 6 & 7. Make sure to put "DDC.HEX" (for example : ddc contents (Fig.6) of PHL18HIT.PAL) together with "DDC.CFG" & "DDCRUN.EXE" each time. It means [copy different DDC.HEX and put it together with "DDC.CFG" & "DDCRUN.EXE"] each time for application of serial number.

In DOS mode : (made directory already)

```
C:\WINDOWS>CD\          (press Enter)
C:\>CD IICRS232          (press Enter)
C:\IICRS232>CD RS232EXE  (press Enter)
C:\IICRS232\RS232EXE>DIR  (press Enter)
```



Fig. 8

Folder with "DDC.CFG", "DDC.HEX", "DDCRUN.EXE" as shown in Fig. 8.

```
C:\IICRS232\RS232EXE>EDIT DDC.CFG  (press Enter)
```

PHL18HIT.PAL(HIT panel)

- Config. setting "2 58 F0" as shown in Fig. 9 for 180MT10P.

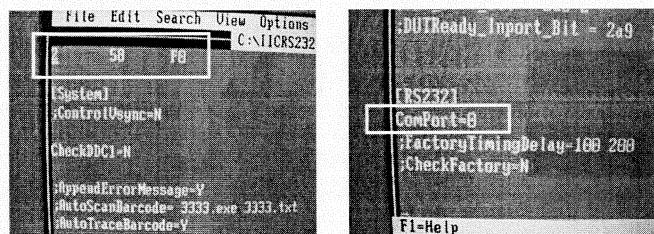


Fig. 9

Fig. 10

- Check ComPort setting as shown in Fig. 10 for RS232 (9 pins) cable.

### 3. Serial number application - Barcode format setting

```
C:\IICRS232\RS232EXE>DDCRUN  (press Enter)
```

Bring up : definition of Barcode format setting as shown in Fig. 11.

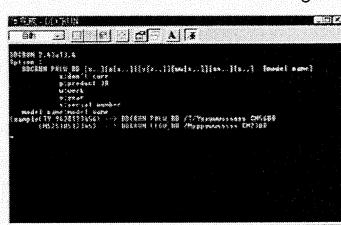


Fig. 11

```
C:\IICRS232\RS232EXE>DDCRUN PHLW_RD /T/YxxYWWSSSSS
( press Enter )
```

Bring up : contents of DDCRUN as shown in Fig. 12.

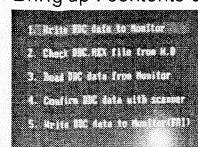


Fig. 12

"PHLW\_RD (fixed name)" was defined by source code of DDCRUN for Philips models already.

As shown in Fig. 12 (1. write DDC data to monitor), press Enter  
Bring up : contents for fill out Serial number as shown in Fig. 13.

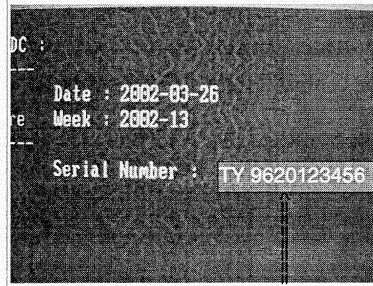


Fig. 13

For example : Fill out "TY 9620123456"

Press Enter

Bring up : Fig. 14 to ask "Entry Factory mode".

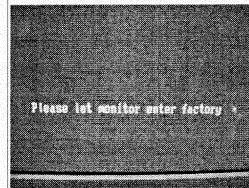


Fig. 14

### Access Factory Mode

#### Step 1 :

Turn off monitor.

#### Step 2 :

[Push Menu "OK" & "AUTO" buttons at the same time and hold it until it comes out "Windows screen"] + [Press power "Power" button and release it instantly]

Press Enter  
Bring up : Fig. 15 (a few seconds only)

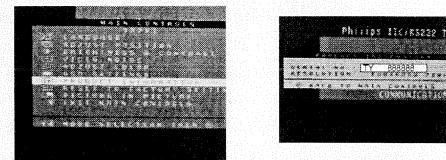


Fig. 15

### Verify Serial number :

By OSD as shown in Fig. 16 & 17 to verify the Serial number.

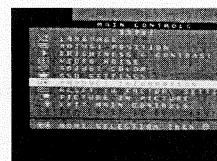


Fig. 16

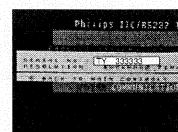


Fig. 17  
Serial number - (Before)



Fig. 18  
Serial number - (After)

<=> Fill out "Q" : Quit Serial number application.

<=> Press "ESC" : Go back to DOS mode.  
Then, finish.

## Repair Tips

### 0. Warning

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the unit via a wrist wrap with resistance. Keep components and tools also at the same potential!

### 1. Servicing of SMDs (Surface Mounted Devices)

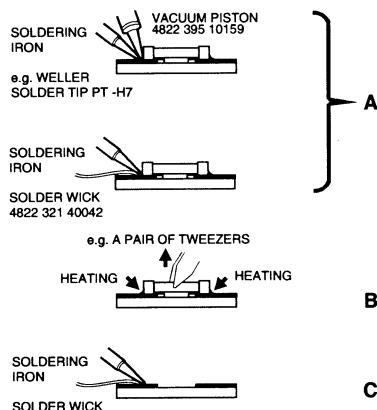
#### 1.1 General cautions on handling and storage

- Oxidation on the terminals of SMDs results in poor soldering. Do not handle SMDs with bare hands.
- Avoid using storage places that are sensitive to oxidation such as places with sulphur or chlorine gas, direct sunlight, high temperatures or a high degree of humidity. The capacitance or resistance value of the SMDs may be affected by this.
- Rough handling of circuit boards containing SMDs may cause damage to the components as well as the circuit boards. Circuit boards containing SMDs should never be bent or flexed. Different circuit board materials expand and contract at different rates when heated or cooled and the components and/or solder connections may be damaged due to the stress. Never rub or scrape chip components as this may cause the value of the component to change. Similarly, do not slide the circuit board across any surface.

#### 1.2 Removal of SMDs

- Heat the solder (for 2-3 seconds) at each terminal of the chip. By means of litz wire and a slight horizontal force, small components can be removed with the soldering iron. They can also be removed with a solder sucker (see Fig. 1A)

Fig. 1 DISMOUNTING



- While holding the SMD with a pair of tweezers, take it off gently using the soldering iron's heat applied to each terminal (see Fig. 1 B).
- Remove the excess solder on the solder lands by means of litz wire or a solder sucker (see Fig. 1C).

#### 1.3 Caution on removal

- When handling the soldering iron, use suitable pressure and be careful.
- When removing the chip, do not use undue force with the pair of tweezers.
- The soldering iron to be used (approx. 30 W) should

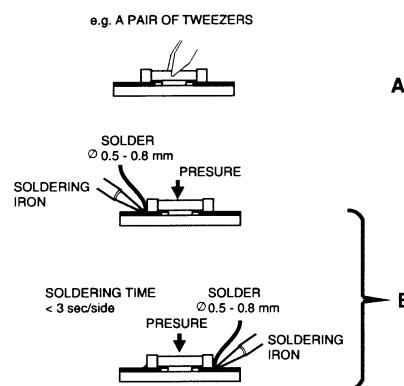
preferably be equipped with a thermal control (soldering temperature: 225 to 250 °C).

- The chip, once removed, must never be reused.

#### 1.4 Attachment of SMDs

- Locate the SMD on the solder lands by means of tweezers and solder the component on one side. Ensure that the component is positioned correctly on the solder lands (see Fig. 2A).
- Next complete the soldering of the terminals of the component (see Fig. 2B).

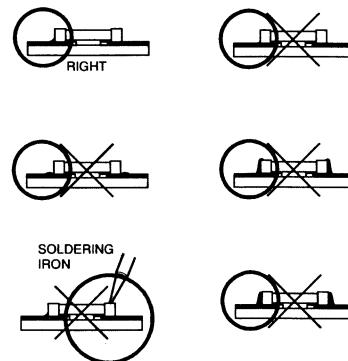
Fig. 2 MOUNTING



### 2. Caution when attaching SMDs

- When soldering the SMD terminals, do not touch them directly with the soldering iron. The soldering should be done as quickly as possible, care must be taken to avoid damage to the terminals of the SMDs themselves.
- Keep the SMD's body in contact with the printed board when soldering.
- The soldering iron to be used (approx. 30 W) should preferably be equipped with a thermal control (soldering temperature: 225 to 250 °C).
- Soldering should not be done outside the solder land.
- Soldering flux (of rosin) may be used, but should not be acidic.
- After soldering, let the SMD cool down gradually at room temperature.
- The quantity of solder must be proportional to the size of the solder land. If the quantity is too great, the SMD might crack or the solder lands might be torn loose from the printed board (see Fig. 3).

Fig. 3 Examples



## Colour adjustment

180MT10P LMT | 39  
 ◀◀ Go to cover page

### LCD COLOUR ANALYZER - CA110

#### 1. SUMMARY

The LCD Colour Analyzer CA-110 was designed to upgrade the white-balance process on production lines for colour LCD televisions and computer colour LCD panels in the colour LCD industry. The CA-110 consists of a main unit and a measuring probe. The measuring probe utilizes an optical system suitable for measurement of colour LCDs and is equipped with a viewfinder to verify the area to be measured.

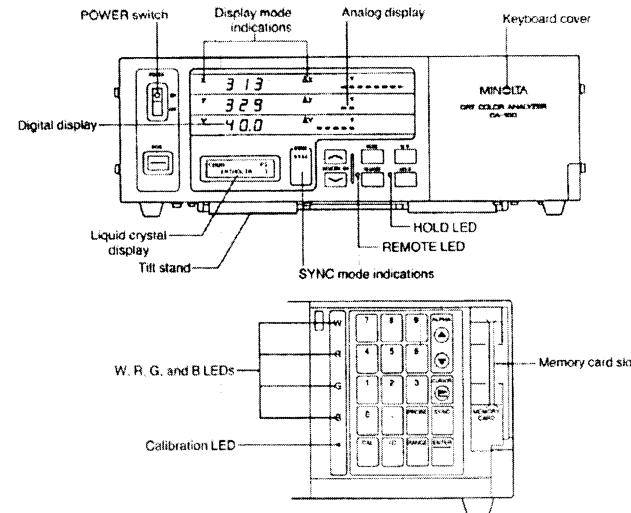
#### 2. APPLICATIONS

- \* White-balance adjustment and inspection on LCD production lines.
- \* Quality control and shipping inspection by LCD manufacturers.
- \* Inspection of LCDs upon receipt by computer manufacturers.

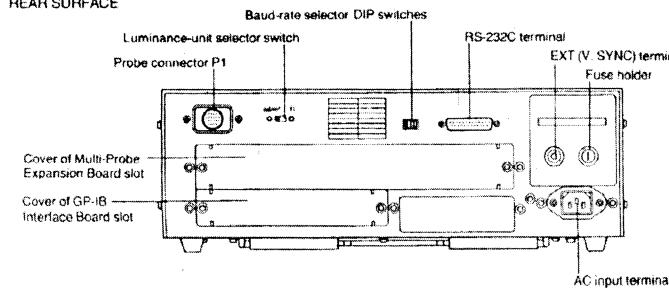
#### NAMES OF PARTS

##### Main Unit

##### FRONT SURFACE



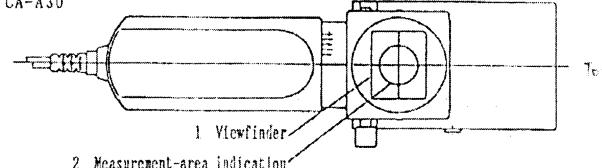
##### REAR SURFACE



40 | 180MT10P LMT  
 ◀◀ Go to cover page

## Colour Adjustment

Probe CA-A30



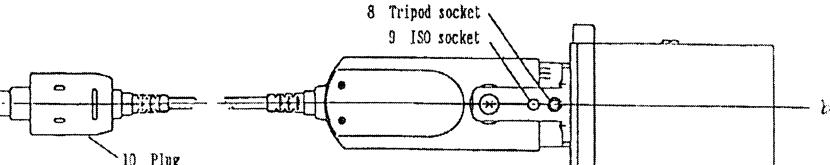
3 Viewfinder-tube mounting screw

4 Viewfinder tube

5 Measurement/viewing selector  
Index

6 Lens-barrel locking screw

7 Lens barrel



1. Viewfinder

2. Measurement-area indication

3. Viewfinder-tube mounting screw

Shows image seen by measuring probe.

Indicates area to be measured.

Removing these two screws (one on each side) allows the viewfinder tube to be removed to clean viewfinder, etc.

4. Viewfinder tube

Can be moved to minimize the effects of surrounding light and provide the best view of the viewfinder image.

5. Measurement/viewing selector

Moves internal mirror; set to  $\odot$  for measurement and to  $\bullet$  for viewing or for zero calibration.

Locks lens barrel at a fixed position.

Can be moved back and forth to set measurement angle.

8. Tripod socket

Can be used to mount measurement probe on a tripod. Depth: 6mm.

9. ISO socket

Can be used to mount measurement probe. ISO Ø5mm, depth: 6mm

10. Plug

Used to connect measuring probe to main unit or optional Multi-Probe Expansion Board.

## Colour adjustment

180MT10P LMT 41

[Go to cover page](#)

### ZERO CALIBRATION

Zero calibration is performed to determine the output of the measuring probe when no light reaches the sensor and to set this as the zero point to which all other measurements are referenced. Zero calibration must be performed after the POWER switch has been set ON before taking any measurements.

To perform zero calibration :

- Before performing zero calibration, check that the measuring probe has been connected to probe connector P1.

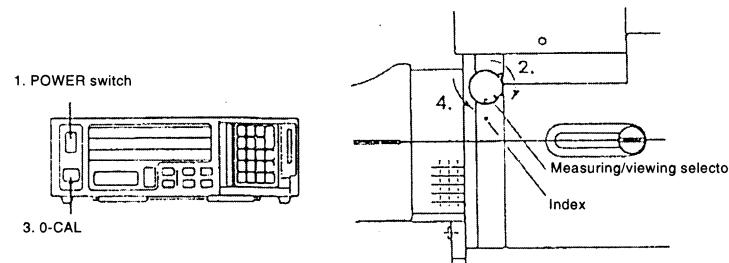
1. Check that the POWER switch is set to ON.

2. Set the measuring/viewing selector to the (viewing) position. (An image can be seen in the viewfinder, but no light will reach the sensor.)

3. Press 0-CAL.

\* If zero calibration is being performed immediately after the POWER switch has been set to ON, press 0-CAL after "PUSH 0-CAL KEY" appears in the liquid crystal display.

4. Set the measuring/viewing selector to the position.  
Measurements will be started immediately.



- "E1" will appear in the liquid crystal display the first time the CA-110 is used after shipment because no standard color has been set.
- Zero calibration can be performed at any time, even if "PUSH 0-CAL KEY" is not shown in the liquid crystal display.

#### Note:

- If the luminance of the LCD to be measured is  $5.00\text{cd}/\text{m}^2$  (1.46 IL) or less, wait at least five minutes after setting POWER switch to ON before performing zero calibration. Also, when measuring LCDs of low luminance, zero calibration should be performed approximately once an hour to ensure accuracy.
- If the ambient temperature changes after zero calibration has been performed, perform zero calibration again.
- Do not press any key while zero calibration is being performed. If a key is pressed, the time required for zero calibration will become longer.

To check if zero calibration was performed correctly, place the receptor area of the probe face down on a flat surface so that no light reaches the receptor area.

If the display shown at right appears in the liquid crystal display, perform zero calibration again.

- Even when "OFFSET ERROR" appears in the liquid crystal display, if light reaches the receptor area of the measuring probe, measured values will appear in the digital and analog displays. However, these values will not be accurate.

If any other display is shown, zero calibration was performed correctly.

OFFSET ERROR  
PUSH 0-CAL KEY

## Colour Adjustment

42 180MT10P LMT

[Go to cover page](#)

### SETTING MEASUREMENT AREA

Measurement areas of  $\varnothing 25\text{mm}$  and  $\varnothing 50\text{mm}$  can be selected by extending or retracting the lens barrel. The  $\varnothing 25\text{mm}$  measurement area can be used for measuring LCDs with 2 - inch or greater diagonals; the  $\varnothing 50\text{mm}$  measurement area can be used for measuring LCDs with 4 - inch or greater diagonals.

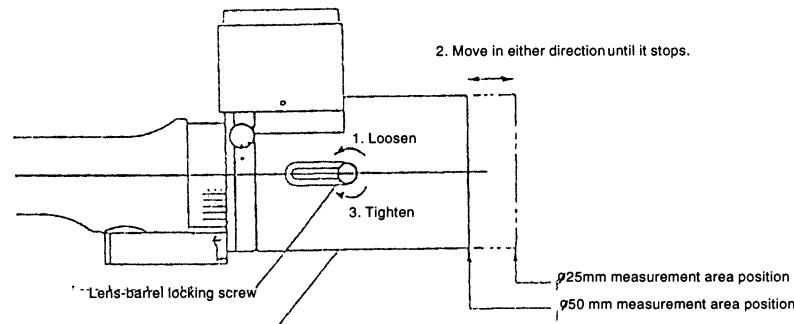
#### Set the measurement area :

Using a slotted screwdriver, loosen the lens - barrel locking screw.

Slide the lens barrel to the position corresponding to the desired measurement area. The lens barrel should be slid in the desired direction until it stops.  
Extending the lens barrel fully sets the  $\varnothing 25\text{mm}$  measurement area: retracting the lens barrel fully sets the  $\varnothing 50\text{mm}$  measurement area.

Use the screwdriver to tighten the lens - barrel locking screw and lock the lens barrel in position.

Changing the measurement area also changes the measurement angle, this may result in differences between values measured with the  $\varnothing 25\text{mm}$  measurement area and those measured with the  $\varnothing 50\text{mm}$  measurement area to the viewing - angle characteristics of the LCD. For this reason, it is recommended that the measurement area be constant for all measurements.



## Colour adjustment

180MT10P LMT 43

[Go to cover page](#)

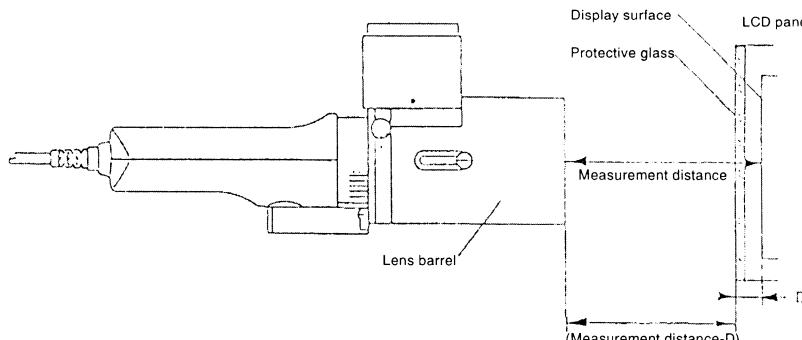
### SETTING MEASUREMENT DISTANCE

The measurement distance (the distance from the front of the measuring probe's lens barrel to the display surface of the LCD) should be set using a ruler according to the procedure below.

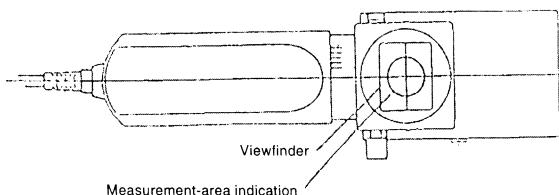
1. Mount the measuring probe on a tripod or other stand and mount the LCD on a suitable stand.
2. While using a ruler to measure the distance from the front of the measuring probe's lens barrel to the LCD's display surface, move the measuring probe or the LCD until the distance is the correct distance for the measurement area in use.

measurement area	Ø 25mm	Ø 50mm
measurement distance*	135mm+/-5mm	210mm+/-10mm

\* Distance from the tip of the measuring probe's lens barrel to the LCD's display surface.



3. While looking through the viewfinder, move the measuring probe or LCD until the LCD section to be measured is inside the measurement-area indication in the viewfinder.



180MT10P LMT 43

[Go to cover page](#)

### White Balance Adjustment

#### Alignment procedure

1. Turn on 180MT LCD/TV monitor.

2. Turn on the Timing/Pattern generator. See Fig. 1

Setting generator to provide CROSS-Hatch pattern at

Resolution : 1024 x 768

Timing : H= 48 KHz

V= 60 Hz

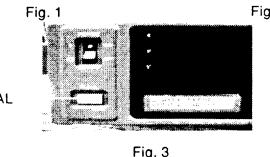
3. Preset LCD colour Analyzer CA-110

- Remove the lens protective cover of probe CA-A30.

- Set Measuring/viewing selector to Measuring position for reset analyzer. (Zero calibration) as Fig. 2

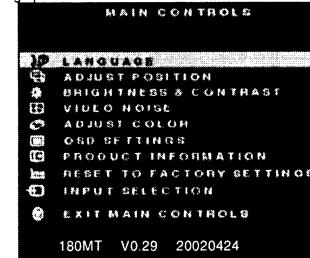
- Turn on the colour analyzer (CA-110).

- Press 0-CAL button to starting reset analyzer. See Fig. 3



4. Entering factory adjustment mode of LCD/TV Monitor.

- To hold OK and AUTO buttons then power on the monitor. Press OK to bring up OSD menu for confirmation.



Note : after alignment, please reset OSD to user s mode for normal operation. Otherwise, the monitor won't enter power saving mode and showing full white picture all the time as no video signal supplied. To leave factory mode by restart the monitor.

5. Adjust OSD menu to lower position of screen (i.g. adjust V-position to value "0" at submenu of OSD Setting).

6. Setting Brightness and Contrast

- Adjust Brightness to value "70".

- Adjust Contrast to value "50".



7. Switch light probe to Viewing position.

8. Move the Lens barrel forward or backward to get clear image as shown in Fig. 4

9. Switch light probe to Measuring position. It should be able to indicate colour value on the CA-110.

## Colour Adjustment

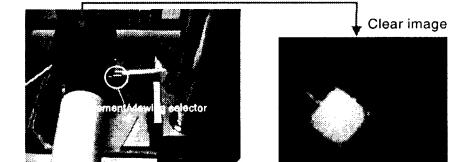
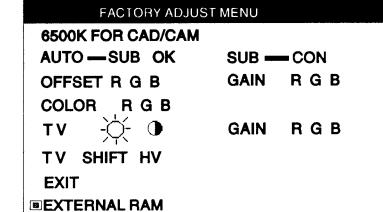


Fig. 4

10. Setting pattern to full white picture.

11. Press OK then select LCD TV V1.28 20011030 by ▼ button.

12. Press OK to bring up submenu as following windows.



9300° K

13. Press ▲ or ▼ buttons to select R G B. Increase/decrease value by press + - or + - buttons until the X, Y co-ordinates as below:

x= 0.281 ± 0.005

y= 0.311 ± 0.005

Y= 250 nits

6500° K

14. Setting X, Y value listed as below:

X= 0.312 ± 0.005

Y= 0.338 ± 0.005

Y= 250 nits

Alignment hits: 1. R for x value , G for y value, B for Y value on the colour analyzer.

2. If the colour analyzer has been calibrated and preset colour temperature in it. Please switch to correct setting in accordance with colour settings.

15. Gray scale checking

- Switch Timing/pattern generator to

Pattern: 32 gray scale

Timing: 1024 X 768 60Hz 48KHz

- Setting both Brightness and Contrast to 50 (Value).

- Check black and white scale are visible clearly across the screen.

See Fig. 1

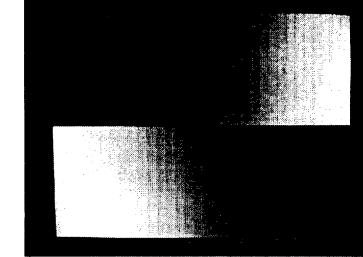
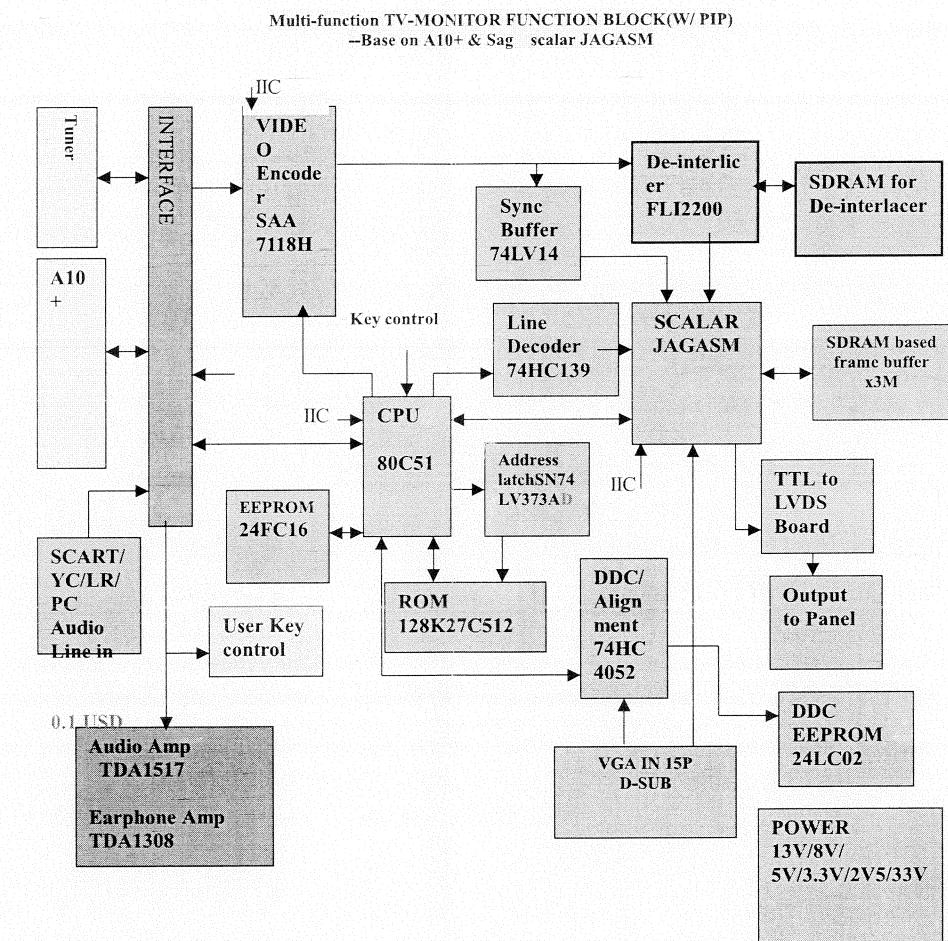
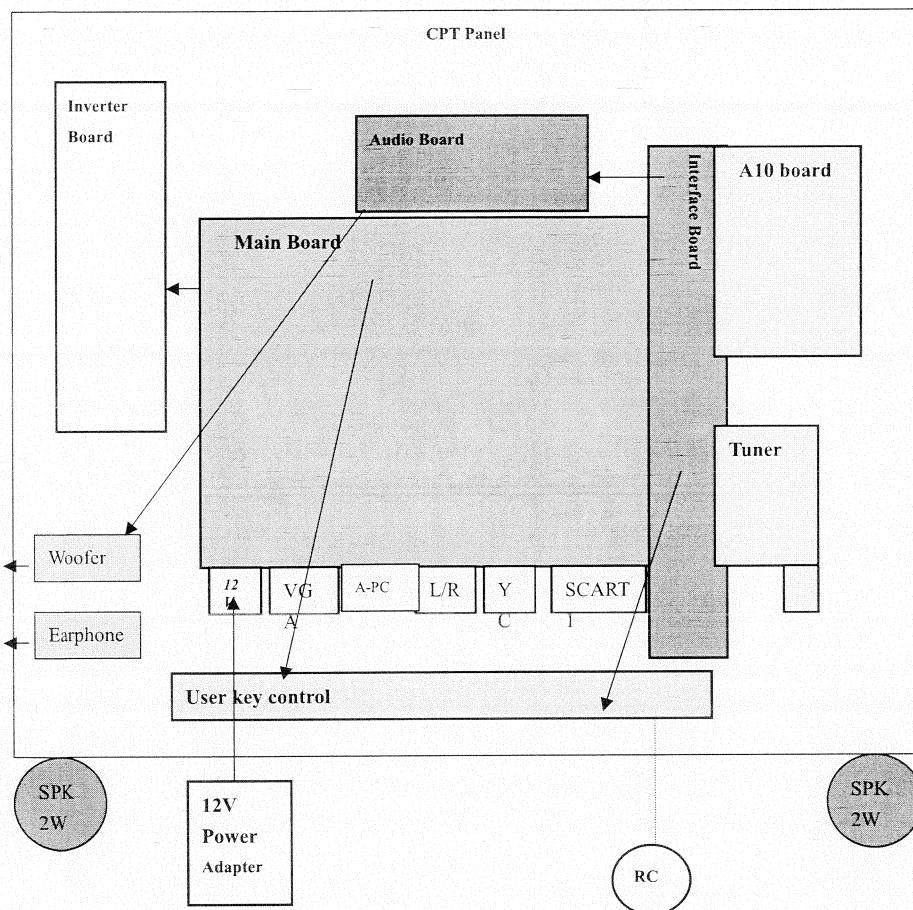


Fig. 1

Note: The bright scale will be saturated, if Y is too large. The dark scale will be invisible, if Y is too small. Re-alignment or review procedure again to correct this.

**Block Diagram**

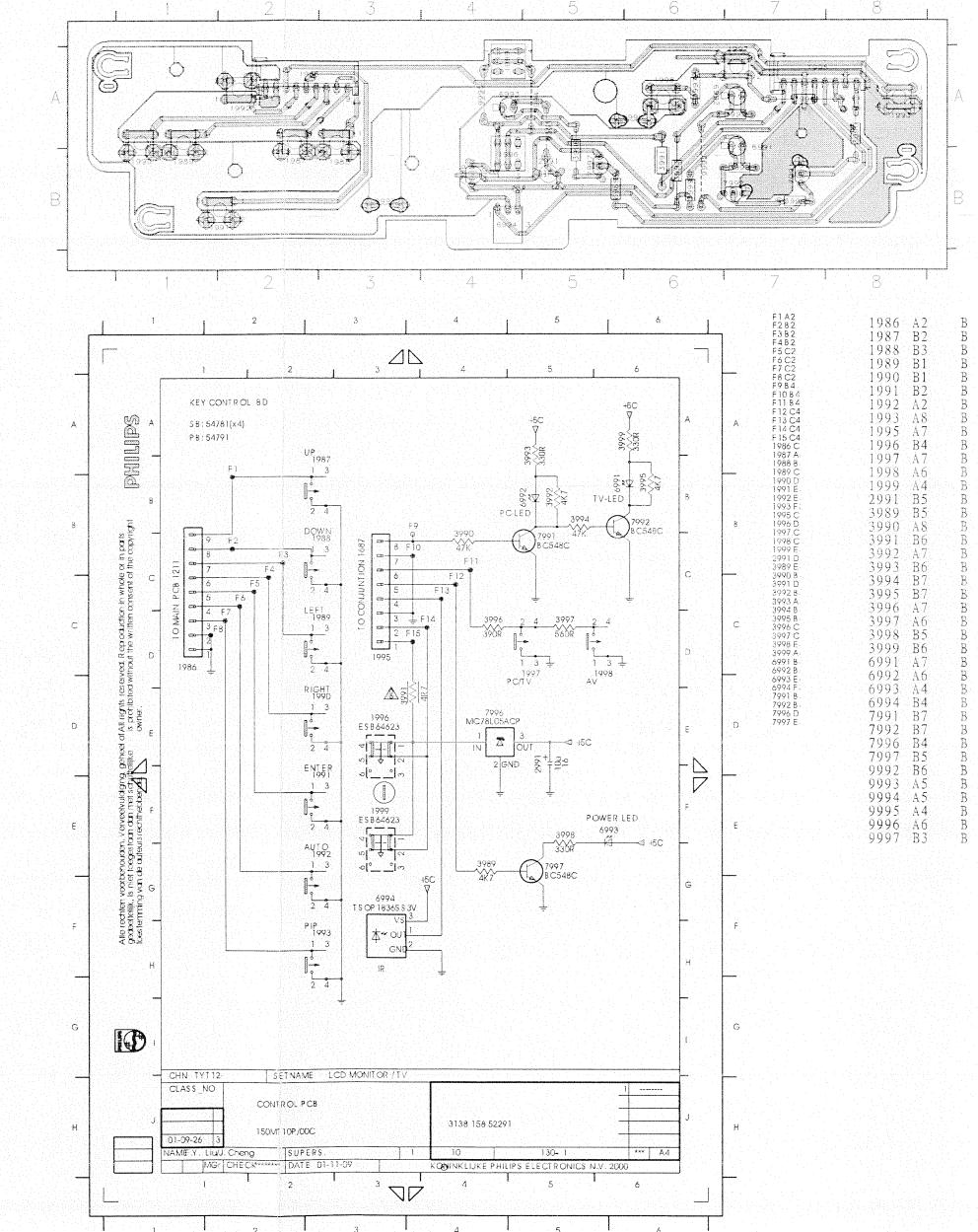
**Architecture of Multi-function TV-Monitor**



**Control Panel Diagram and C.B.A.**

180MT10P LMT 45

◀ Go to cover page

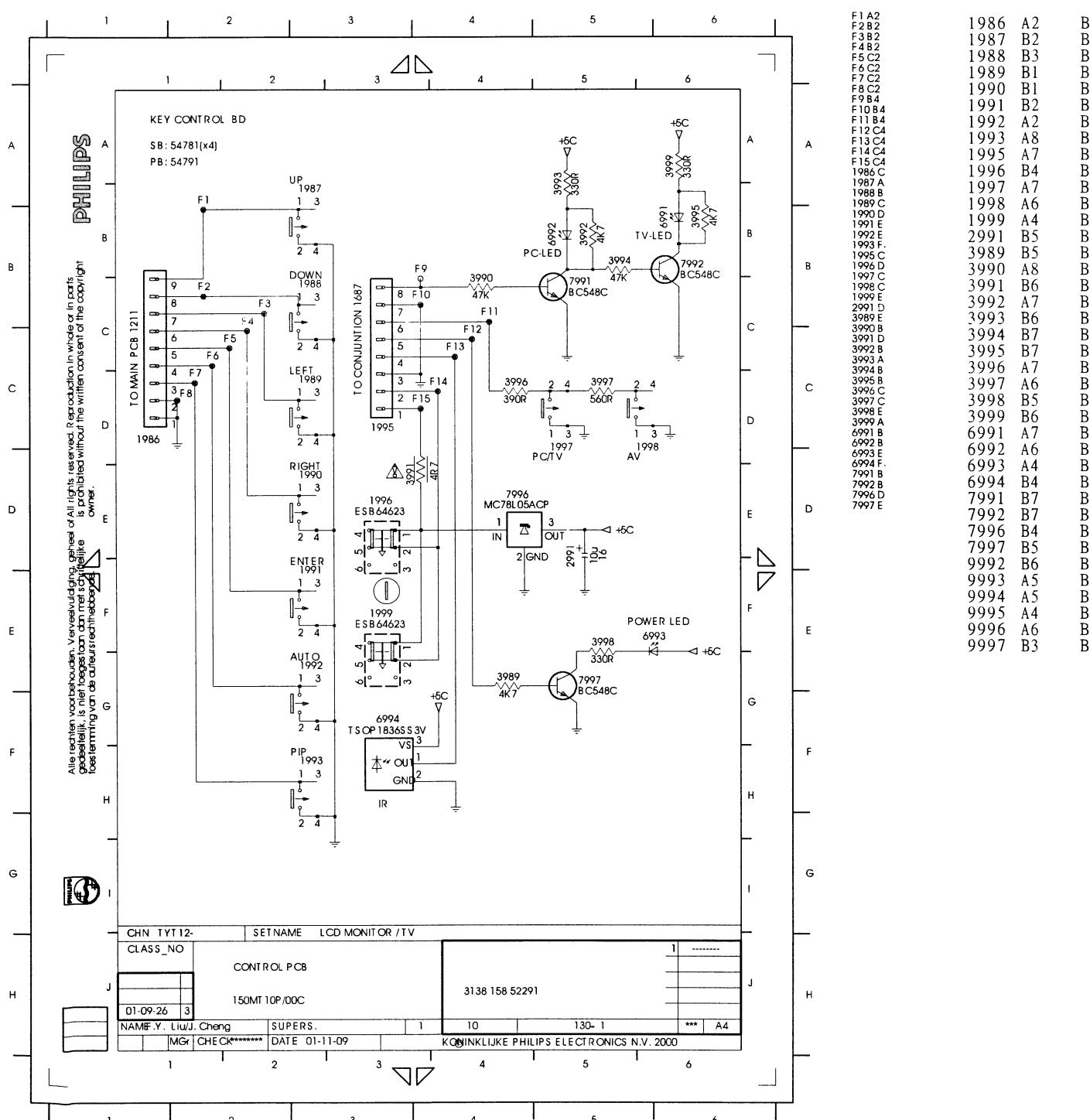
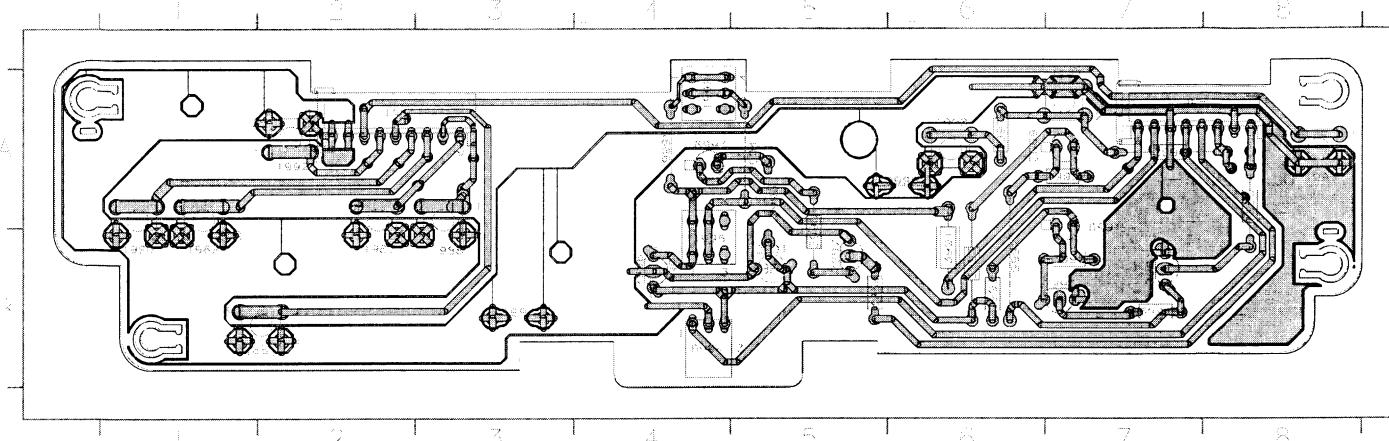


# Control Panel Diagram and C.B.A.

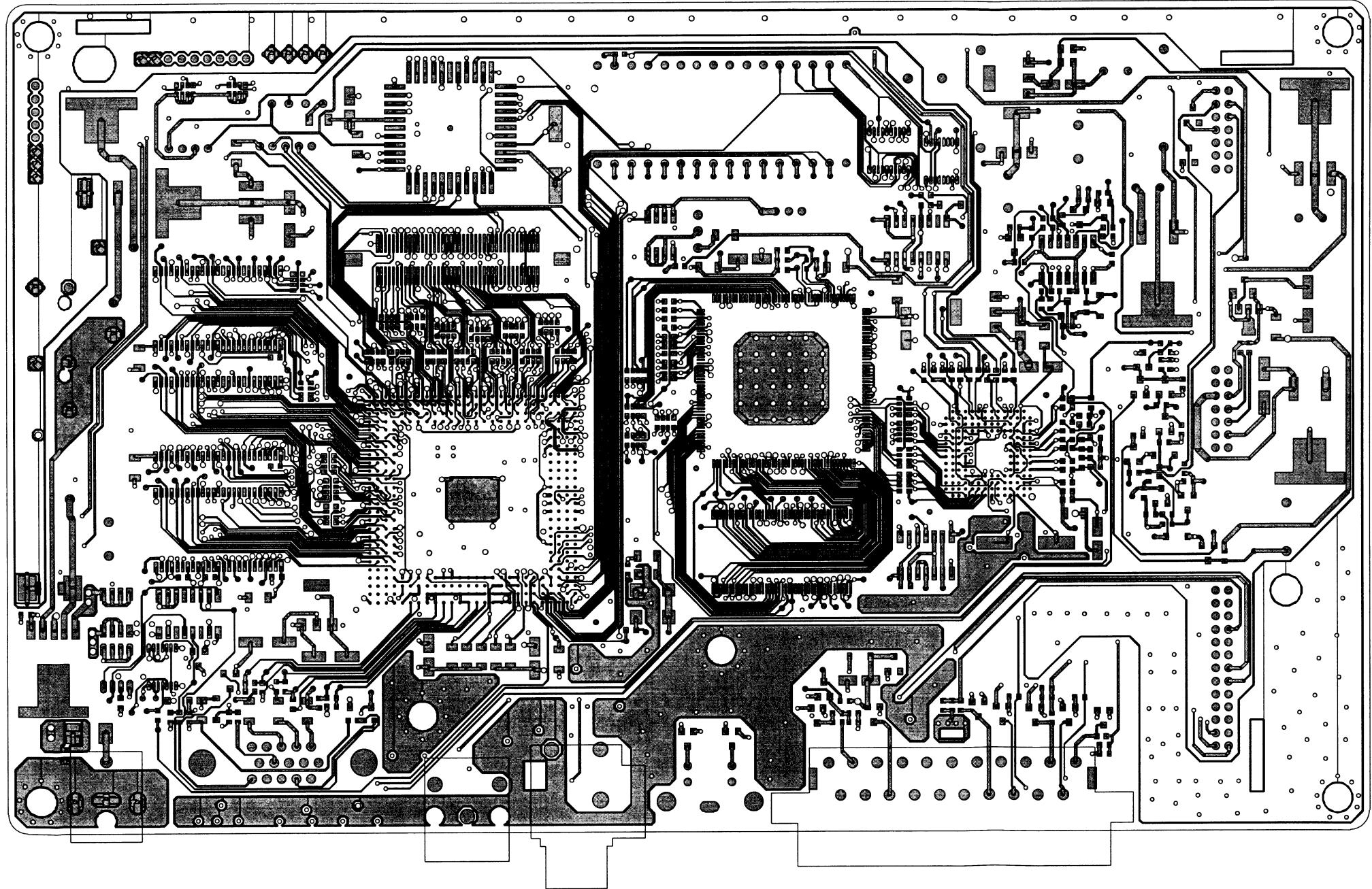
180MT10P LMT

45

[Go to cover page](#)



## Scaler Board C.B.A.

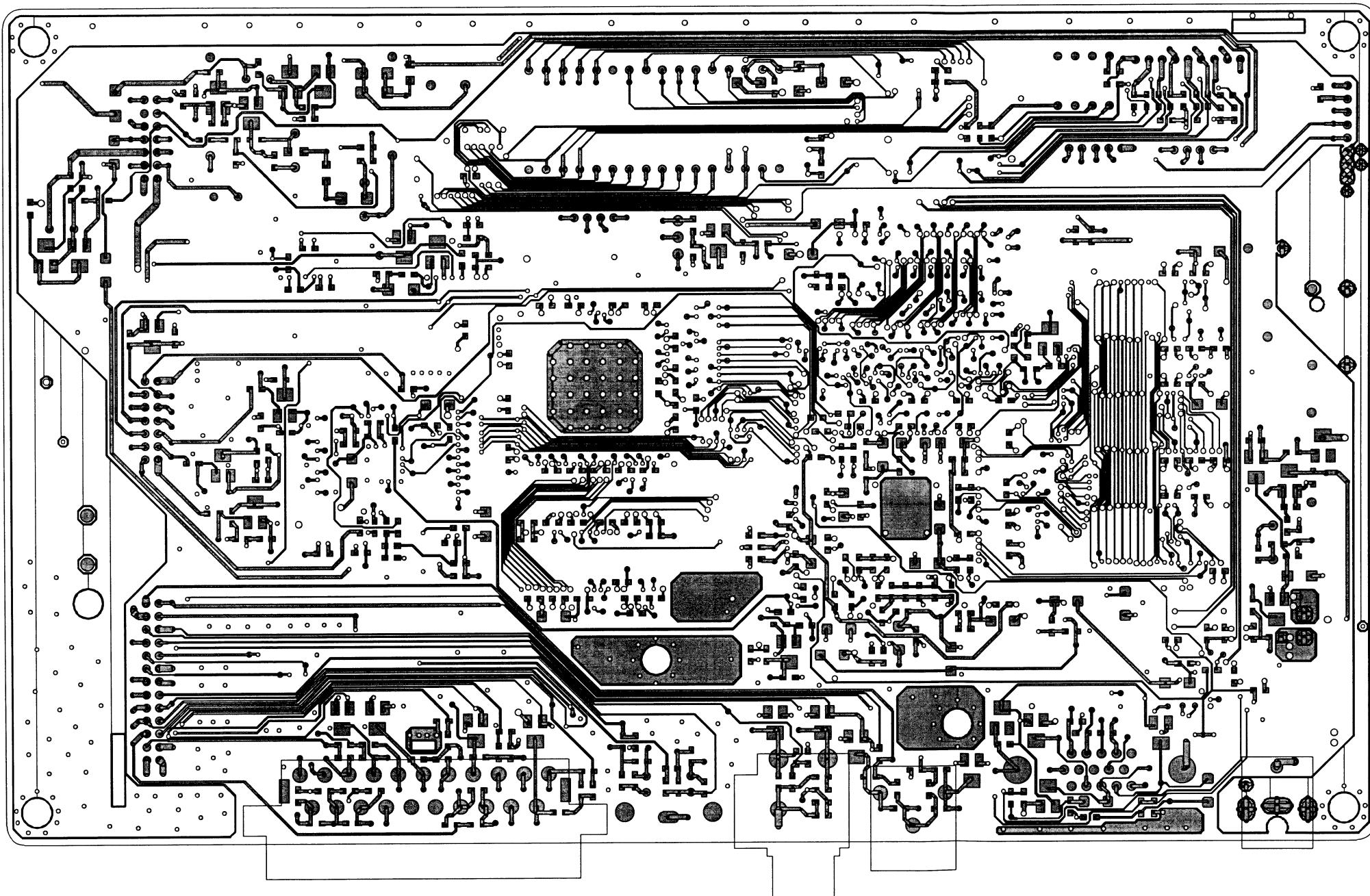


2007 B4 A	2453 B2 A	3317 B4 A	5363 B4 A	1001 B1 B
2015 B4 A	2457 A2 A	3318 B3 A	5379 A3 A	1003 A3 B
2018 B4 A	2458 A2 A	3319 B4 A	5375 A3 A	1011 A3 B
2018 A2 A	2459 A2 A	3321 B4 A	5422 A2 A	1021 A4 B
2019 A1 A	2461 A2 A	3322 B4 A	5423 A1 A	1201 A1 B
2024 A1 A	2462 A2 A	3323 B4 A	5471 B2 A	1203 B1 B
2025 A1 A	2463 A2 A	3325 B4 A	5611 B1 A	1211 A1 B
2031 A2 A	2465 A2 A	3326 B4 A	5612 B2 A	1301 A1 B
2032 A2 A	2467 A2 A	3327 B3 A	5613 B2 A	1351 A1 B
2033 A1 A	2468 A2 A	3331 B4 A	5616 B2 A	1404 A4 B
2034 A1 A	2469 A2 A	3332 B3 A	5631 B2 A	1601 B3 B
2035 A1 A	2471 A2 A	3333 B3 A	5632 B2 A	1631 B3 B
2036 A1 A	2472 A2 A	3339 B3 A	6011 A4 A	1632 B2 B
2052 B4 A	2473 A2 A	3342 A3 A	6019 A1 A	1633 B2 B
2057 B4 A	2475 A2 A	3343 A3 A	6021 A1 A	1635 B4 B
2201 A3 A	2477 A2 A	3345 B2 A	6025 A2 A	2006 A1 B
2202 A3 A	2478 A2 A	3346 B3 A	6026 B2 A	2007 B
2203 A3 A	2479 A2 A	3356 A3 A	6311 B3 A	2017 A1 B
2206 A2 A	2479 B2 A	3357 B3 A	6312 B3 A	2020 A3 B
2207 A3 A	2481 B2 A	3358 B3 A	6313 B4 A	2021 A4 B
2211 A4 A	2482 B2 A	3359 B3 A	6316 B3 A	2026 A4 B
2212 A4 A	2483 B2 A	3360 B3 A	6606 B1 A	2027 B
2214 A4 A	2485 B2 A	3362 B3 A	6607 B1 A	2030 A4 B
2215 A4 A	2486 B2 A	3363 A3 A	6608 B2 A	2417 B4 B
2216 A4 A	2487 B2 A	3365 A3 A	6611 B2 A	3023 A3 B
2217 A4 A	2488 B2 A	3366 A3 A	6633 B3 A	3040 A4 B
2218 A4 A	2489 B2 A	3367 A3 A	6635 B3 A	5005 A1 B
2304 A2 A	2491 B2 A	3368 A3 A	6636 B3 A	5006 B
2311 B3 A	2492 B2 A	3371 A3 A	6637 B3 A	5022 A4 B
2312 B4 A	2502 B1 A	3372 B3 A	7006 A4 A	7202 A1 B
2316 B3 A	2505 B1 A	3376 B3 A	7012 B4 A	7203 A3 B
2320 A3 A	2506 B1 A	3378 B3 A	7013 A4 A	
2321 B4 A	2508 B2 A	3379 B3 A	7018 A2 A	
2322 B4 A	2511 B2 A	3381 B3 A	7019 A1 A	
2324 A3 A	2515 B2 A	3384 A3 A	7020 A1 A	
2325 A3 A	2516 B1 A	3386 A3 A	7023 A1 A	
2328 B3 A	2517 B1 A	3401 B2 A	7024 A1 A	
2329 A3 A	2518 B2 A	3411 B2 A	7028 A1 A	
2330 B3 A	2523 B2 A	3414 B2 A	7032 A2 A	
2331 A3 A	2532 B2 A	3415 B1 A	7033 A2 A	
2332 A3 A	2533 B2 A	3416 B1 A	7041 A1 A	
2333 B3 A	2534 B3 A	3417 B1 A	7042 A1 A	
2334 B3 A	2535 B2 A	3419 A1 A	7351 B3 A	
2335 A3 A	2537 B3 A	3420 A1 A	7352 A4 A	
2336 A3 A	2538 B3 A	3421 A2 A	7411 A1 A	
2337 A3 A	2539 B3 A	3424 B1 A	7412 A1 A	
2338 A3 A	2541 B3 A	3425 B1 A	7413 A1 A	
2339 A3 A	2542 B3 A	3427 B1 A		
2340 A3 A	2543 B3 A	3428 B1 A		
2342 B3 A	2544 B3 A	3430 A2 A		
2343 B3 A	2545 B3 A	3432 B2 A		
2345 B3 A	2546 B3 A	3436 B1 A		
2346 B3 A	2547 B3 A	3439 B2 A		
2348 B3 A	2548 B3 A	3445 B2 A		
2349 B3 A	2549 B3 A	3455 A1 A		
2352 B3 A	2550 B3 A	3455 B2 A		
2354 B3 A	2551 B4 A	3456 A1 A		
2355 B3 A	2552 B4 A	3460 B2 A		
2356 B3 A	2553 B4 A	3462 B2 A		
2358 B3 A	2554 B4 A	3465 B2 A		
2359 B3 A	2555 B4 A	3471 B2 A		
2360 B3 A	2556 B4 A	3472 B2 A		
2361 B3 A	2557 B4 A	3473 B2 A		
2362 B3 A	2558 B4 A	3473 B2 A		
2363 B3 A	2559 B4 A	3603 B1 A		
2364 B3 A	2560 B4 A	3609 B1 A		
2365 B3 A	2561 B4 A	3612 B1 A		
2366 B3 A	2562 B4 A	3622 B1 A		
2367 A3 A	2563 B4 A	3624 A1 A		
2368 A3 A	2564 B4 A	3625 B1 A		
2369 A3 A	2565 B4 A	3627 B1 A		
2370 A3 A	2566 B4 A	3628 B1 A		
2371 A3 A	2567 B4 A	3631 B2 A		
2372 B3 A	2568 B4 A	3632 B2 A		
2373 B3 A	2569 B4 A	3633 B2 A		
2374 B3 A	2570 B4 A	3635 B2 A		
2375 A3 A	2571 B4 A	3637 B2 A		
2376 A3 A	2572 B4 A	3638 B2 A		
2377 A4 A	2573 B4 A	3639 B2 A		
2378 A4 A	2574 B4 A	3641 A1 A		
2379 A4 A	2575 B4 A	3641 B1 A		
2381 A4 A	2576 B4 A	3642 A1 A		
2382 A4 A	2577 B4 A	3642 B1 A		
2383 A4 A	2578 B4 A	3643 B1 A		
2384 A4 A	2579 B4 A	3645 A1 A		
2385 A4 A	2580 B4 A	3646 A1 A		
2386 A4 A	2581 B4 A	3648 A1 A		
2388 A4 A	2582 B4 A	3649 A1 A		
2389 A4 A	2583 B4 A	3650 A1 A		
2390 A4 A	2584 B4 A	3651 A1 A		
2391 A4 A	2585 B4 A	3651 B1 A		
2392 A4 A	2586 B4 A	3652 B1 A		
2393 A4 A	2587 B4 A	3675 A1 A		
2394 A4 A	2588 B4 A	3675 B3 A		
2395 A4 A	2589 B4 A	3676 A4 A		
2396 A4 A	2590 B4 A	3677 A4 A		
2397 A3 A	2591 B4 A	3678 A4 A		
2421 B1 A	3201 A3 A	3679 B3 A		
2422 B1 A	3202 A3 A	3680 B3 A		
2431 A1 A	3203 A3 A	3682 B3 A		
2432 A1 A	3205 A3 A	3683 B3 A		
2433 A1 A	3206 A3 A	3684 B3 A		
2435 A1 A	3213 A4 A	3685 B4 A		
2436 A1 A	3215 A4 A	3686 B4 A		
2439 B2 A	3216 A4 A	3687 B4 A		
2441 B1 A	3217 A4 A	3688 B4 A		

Scaler Board (C.B.A)

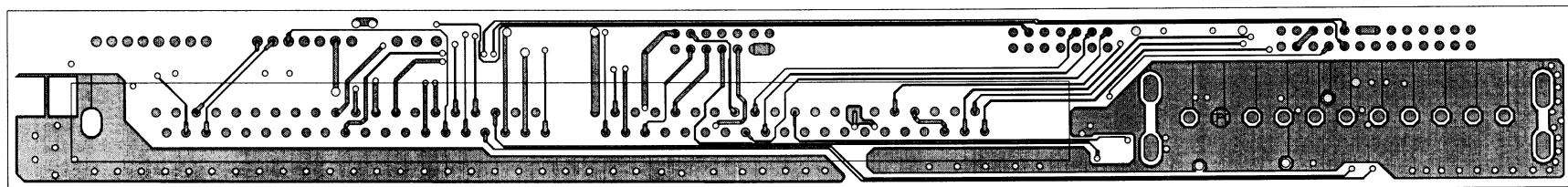
Hmc.map

180MT10P LMT 47  
◀ Go to cover page

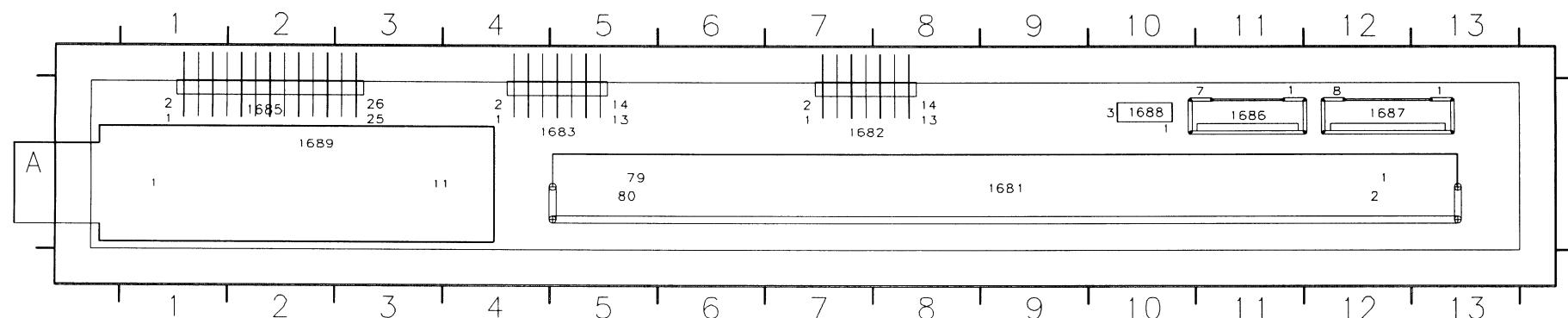
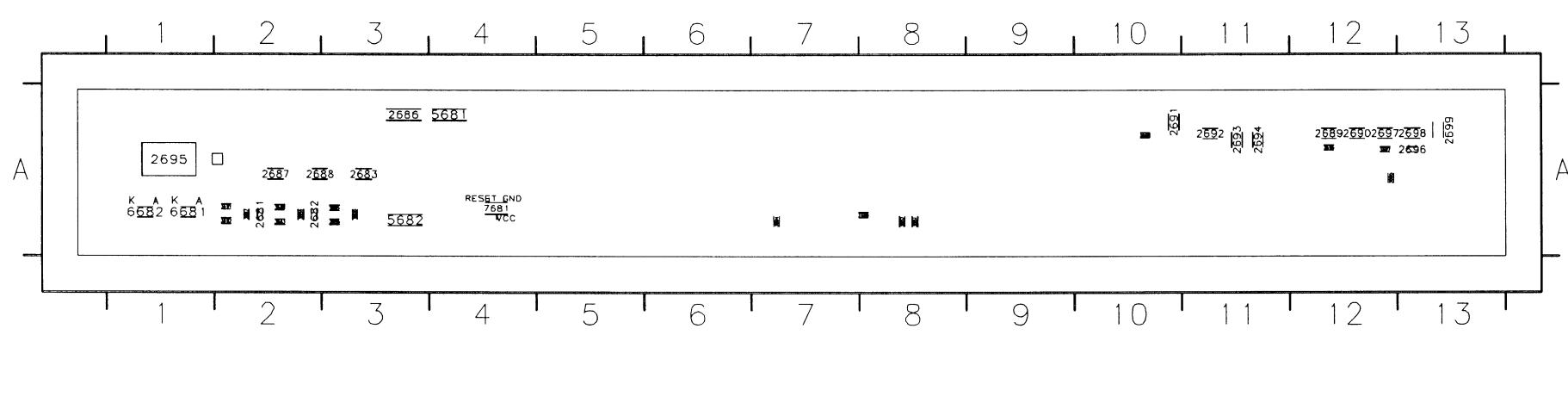
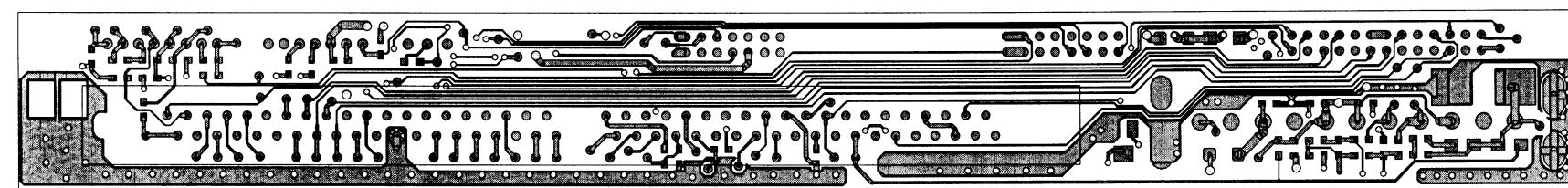


1002 B1 B	3212 A1 B	3613 B3 B	1001 B4 B
1202 A2 B	3202 B1 B	3615 B3 B	1003 A2 B
1331 B2 B	3203 B1 B	3623 B3 B	1011 A2 B
1371 A2 B	3204 B1 B	3625 B3 B	1021 A B
1401 B2 B	3205 B1 B	3626 B3 B	1023 A4 B
2001 B1 B	3206 B1 B	3628 A4 B	1203 A4 B
2014 A4 B	3209 B1 B	5026 B	1211 A4 B
2022 A4 B	3210 B1 B	5027 B	1301 B4 B
2203 A4 B	3211 B1 B	5056 A3 B	1351 A4 B
2025 B1 B	3212 B1 B	5201 A2 B	1401 B1 B
2027 A4 B	3213 B1 B	5202 A1 B	1601 B2 B
2038 A4 B	3215 B2 B	5301 B1 B	1631 B2 B
2051 A1 B	3216 B2 B	5302 B1 B	1632 B3 B
2053 B1 B	3220 B2 B	5306 B	1633 B3 B
2056 B2 B	3229 B1 B	5308 B1 B	1634 B
2058 B1 B	3230 B1 B	5313 B2 B	1635 B
2203 A2 B	3231 B1 B	5361 A1 B	2004 B4 B
2301 B1 B	3232 B1 B	5362 A1 B	2008 A4 B
2302 B1 B	3235 A1 B	5416 B	2009 A4 B
2305 B1 B	3235 B1 B	5426 A4 B	2017 A4 B
2307 A1 B	3236 B1 B	5451 A3 B	2020 A2 B
2326 B2 B	3238 A2 B	5456 A3 B	2021 B
2327 B2 B	3238 A2 B	5457 A3 B	2027 A1 B
2347 B1 B	3238 A2 B	5615 B3 B	2030 A1 B
2349 A4 B	3238 A2 B	5620 B	2417 B1 B
2352 B2 B	3238 A2 B	6022 A4 B	3041 A1 B
2355 B2 B	3238 A2 B	6023 A4 B	3044 A4 B
2357 B2 B	3238 A2 B	6026 A3 B	5005 A4 B
2359 B2 B	3238 A2 B	6027 A4 B	5007 A4 B
2384 A1 B	3239 A2 B	6301 B1 B	5022 A1 B
2387 A1 B	3239 A2 B	6302 B1 B	7202 A4 B
2390 B1 B	3239 A2 B	6315 B1 B	7203 A2 B
2392 B1 B	3239 A2 B	6317 B2 B	
2393 B1 B	3240 A2 B	6412 B4 B	
2394 B1 B	3240 A4 B	6601 B4 B	
2401 A4 B	3240 A4 B	6602 B4 B	
2402 A4 B	3240 A4 B	6603 B4 B	
2403 A4 B	3240 A4 B	6604 B3 B	
2405 A4 B	3240 A4 B	6605 B	
2406 A4 B	3240 B	6609 B3 B	
2407 A4 B	3241 B	6610 B3 B	
2409 A4 B	3241 A4 B	6612 B3 B	
2411 A4 B	3241 A4 B	6613 B3 B	
2412 A4 B	3242 A3 B	6651 B3 B	
2413 A4 B	3242 A3 B	6652 B	
2414 A4 B	3242 A3 B	7005 B1 B	
2415 A4 B	3242 A3 B	7011 B1 B	
2416 A4 B	3243 A3 B	7016 A1 B	
2418 B4	3243 A3 B	7017 A3 B	
2419 A4 B	3243 A3 B	7020 B	
2426 A4 B	3243 A3 B	7022 A4 B	
2428 A3 B	3243 A4 B	7025 A4 B	
2429 A3 B	3243 A4 B	7027 A4 B	
2433 B4 B	3244 A4 B	7028 A4 B	
2434 B3 B	3244 A4 B	7031 B	
2436 B4 B	3244 A3 B	7035 A4 B	
2452 A3 B	3244 B	7036 A4 B	
2456 A3 B	3244 B	7037 A4 B	
2601 B4 B	3247 A3 B	7038 A4 B	
2602 B3 B	3247 A3 B	7039 B	
2607 B3 B	3248 A3 B	7051 A1 B	
2612 B3 B	3248 A3 B	7052 B1 B	
2613 B3 B	3249 A4 B	7201 A2 B	
3006 B1 B	3251 A2 B	7205 A3 B	
3035 A3 B	3252 A3 B	7206 B	
3036 B1 B	3252 A3 B	7301 B	
3044 A4 B	3252 A3 B	7302 B1 B	
3047 A4 B	3252 A3 B	7323 B1 B	
3056 A4 B	3252 A3 B	7331 A2 B	
3057 A4 B	3253 A3 B	7332 B	
3068 A4 B	3253 A3 B	7362 A1 B	
3069 A4 B	3254 A3 B	7363 B1 B	
3071 A4 B	3254 A3 B	7401 A4 B	
3072 A4 B	3254 B	7402 A4 B	
3073 A4 B	3255 A4 B	7405 A4 B	
3086 A4 B	3255 A4 B	7406 B4 B	
3087 A4 B	3255 A4 B	7407 A4 B	
3088 A4 B	3255 A4 B	7408 A4 B	
3089 A4 B	3256 A4 B	7409 A4 B	
3090 A4 B	3256 A4 B	7410 B	
3091 B4 B	3257 A4 B	7415 A4 B	
3092 B4 B	3257 A4 B	7431 A3 B	
3072 A4 B	3260 B4 B	7451 A3 B	
3073 A4 B	3260 B4 B	7471 B3 B	
3207 A2 B	3267 B4 B	7621 B3 B	
3211 A1 B	3269 B4 B		
3212 A1 B	3269 B4 B		

## Conjunction Diagram



1681 A5 B  
 1682 A7 B  
 1683 A9 B  
 1685 A12 B  
 1686 A3 B  
 1687 A2 B  
 1688 A4 B  
 1689 A12 B  
 1681 A9 B  
 1682 A7 B  
 1683 A5 B  
 1685 A2 B  
 1686 A11 B  
 1687 A12 B  
 1688 A10 B  
 1689 A2 B  
 2681 A2 A  
 2682 A2 A  
 2683 A3 A  
 2686 A3 A  
 2687 A2 A  
 2688 A2 A  
 2689 A12 A  
 2690 A12 A  
 2691 A10 A  
 2692 A11 A  
 2693 A11 A  
 2694 A11 A  
 2695 A1 A  
 2696 A13 A  
 2697 A12 A  
 2698 A13 A  
 2699 A13 A  
 3681 A8 A  
 3682 A8 A  
 3683 A2 A  
 3684 A2 A  
 3685 A3 A  
 3686 A3 A  
 3687 A2 A  
 3688 A2 A  
 3689 A8 A  
 3690 A3 A  
 3691 A2 A  
 3692 A2 A  
 3694 A7 A  
 3695 A12 A  
 3696 A12 A  
 3697 A12 A  
 3698 A10 A  
 5681 A4 A  
 5682 A3 A  
 6681 A1 A  
 6682 A1 A  
 7681 A4 A



# Phone Jack PCB

1681 A5 B  
 1682 A7 B  
 1683 A9 B  
 1685 A12 B  
 1686 A3 B  
 1687 A2 B  
 1688 A4 B  
 1689 A12 B  
 1681 A9 B  
 1682 A7 B  
 1683 A5 B  
 1685 A2 B  
 1686 A11 B  
 1687 A12 B  
 1688 A10 B  
 1689 A2 B  
 2681 A2 A  
 2682 A2 A  
 2683 A3 A  
 2686 A3 A  
 2687 A2 A  
 2688 A2 A  
 2689 A12 A  
 2690 A12 A  
 2691 A10 A  
 2692 A11 A  
 2693 A11 A  
 2694 A11 A  
 2695 A1 A  
 2696 A13 A  
 2697 A12 A  
 2698 A13 A  
 2699 A13 A  
 3681 A8 A  
 3682 A8 A  
 3683 A2 A  
 3684 A2 A  
 3685 A3 A  
 3686 A3 A  
 3687 A2 A  
 3688 A2 A  
 3689 A8 A  
 3690 A3 A  
 3691 A2 A  
 3692 A2 A  
 3694 A7 A  
 3695 A12 A  
 3696 A12 A  
 3697 A12 A  
 3698 A10 A  
 5681 A4 A  
 5682 A3 A  
 6681 A1 A  
 6682 A1 A  
 7681 A4 A

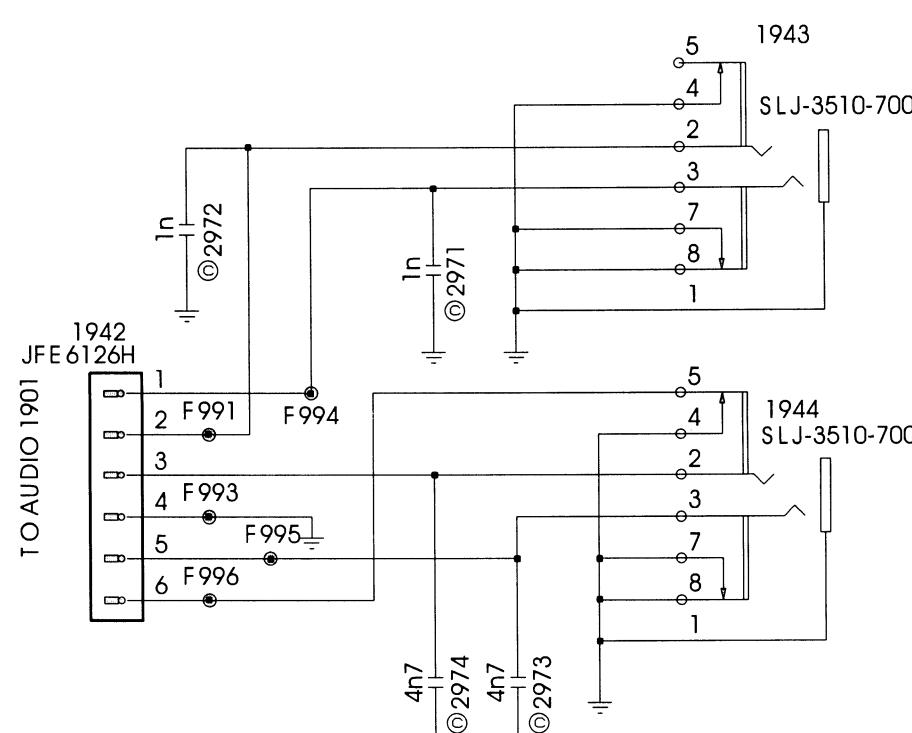
**PHILIPS**

Alle rechten voorbehouden. Vervelvuldiging, geheel of All rights reserved. Reproduction in whole or in parts  
gedeeltelijk, is niet toegestaan dan met schriftelijke  
toestemming van de auteur/rechthebbende.

PHONE JACK BD

SB: 55312 x24  
PB: 55322

1942 C1  
 1943 B3  
 1944 D3  
 2971 C2  
 2972 C1  
 2973 E2  
 2974 E2  
 F991 D1  
 F993 D1  
 F994 D2  
 F995 D1  
 F996 D1



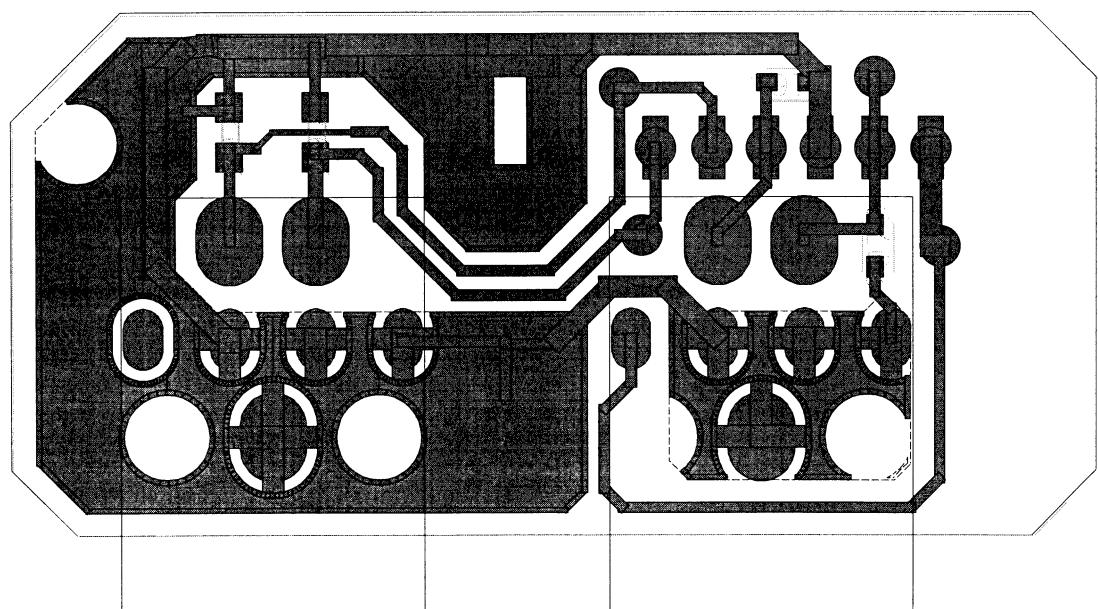
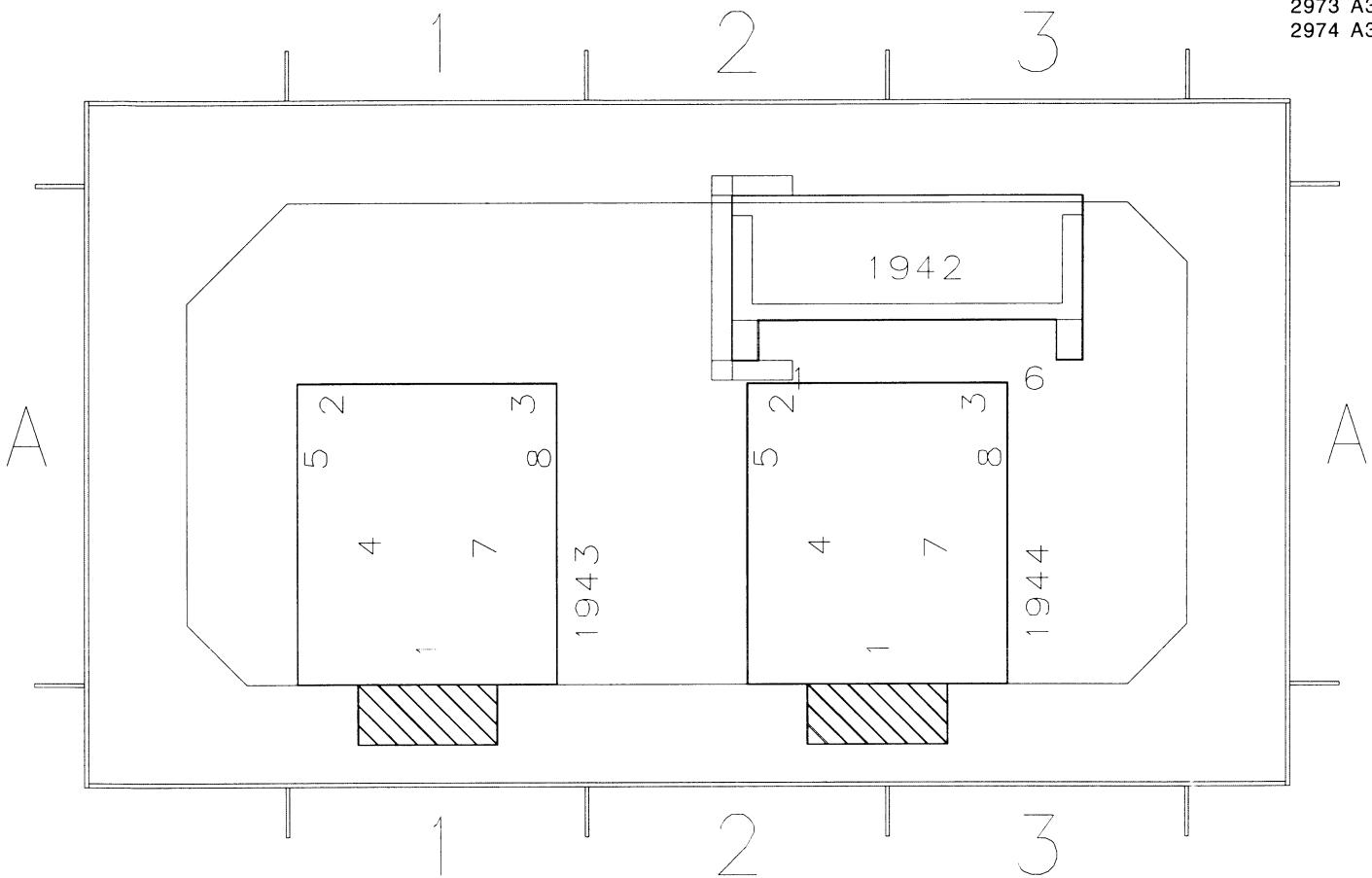
NOTES:  
© STAND FOR CHIP COMPONENTS.



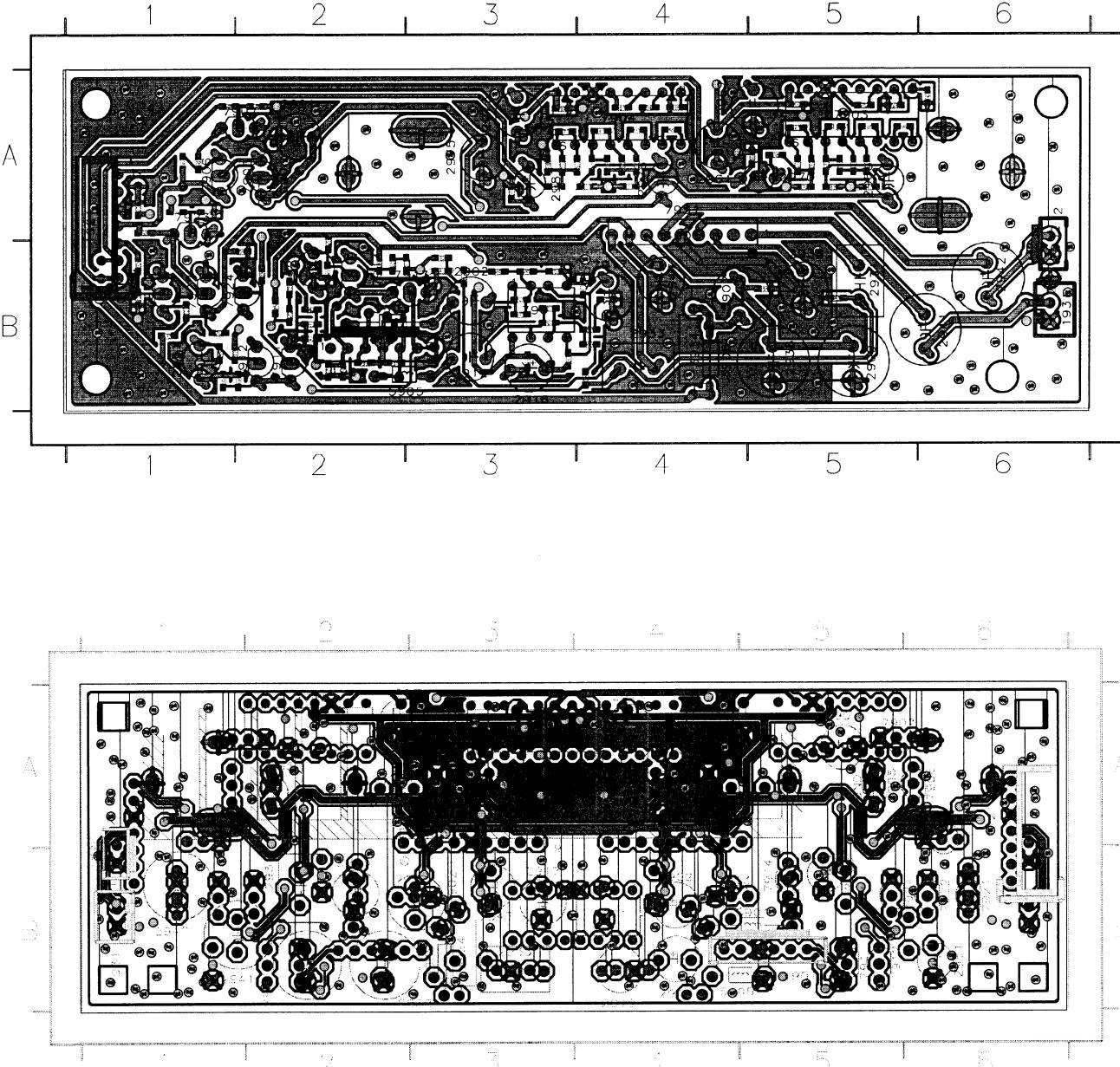
CHN	TYT 12-	SET NAME	LCD MONITOR / TV	1
CLASS_NO				
J		PHONE JACK PCB		
	02-04-30	3	180MT 10P/00C	3138 158 53721
	NAMF.Y. Liu/J. Cheng	SUPERS.	1 10 130-1	*** A4
	MGr	CHECK*****	DATE 01-11-09	KONINKLIJKE PHILIPS ELECTRONICS N.V. 2000

# Phone Jack C.B.A

1942	A3	B
1943	A1	B
1944	A3	B
2971	A1	A
2972	A1	A
2973	A3	A
2974	A3	A

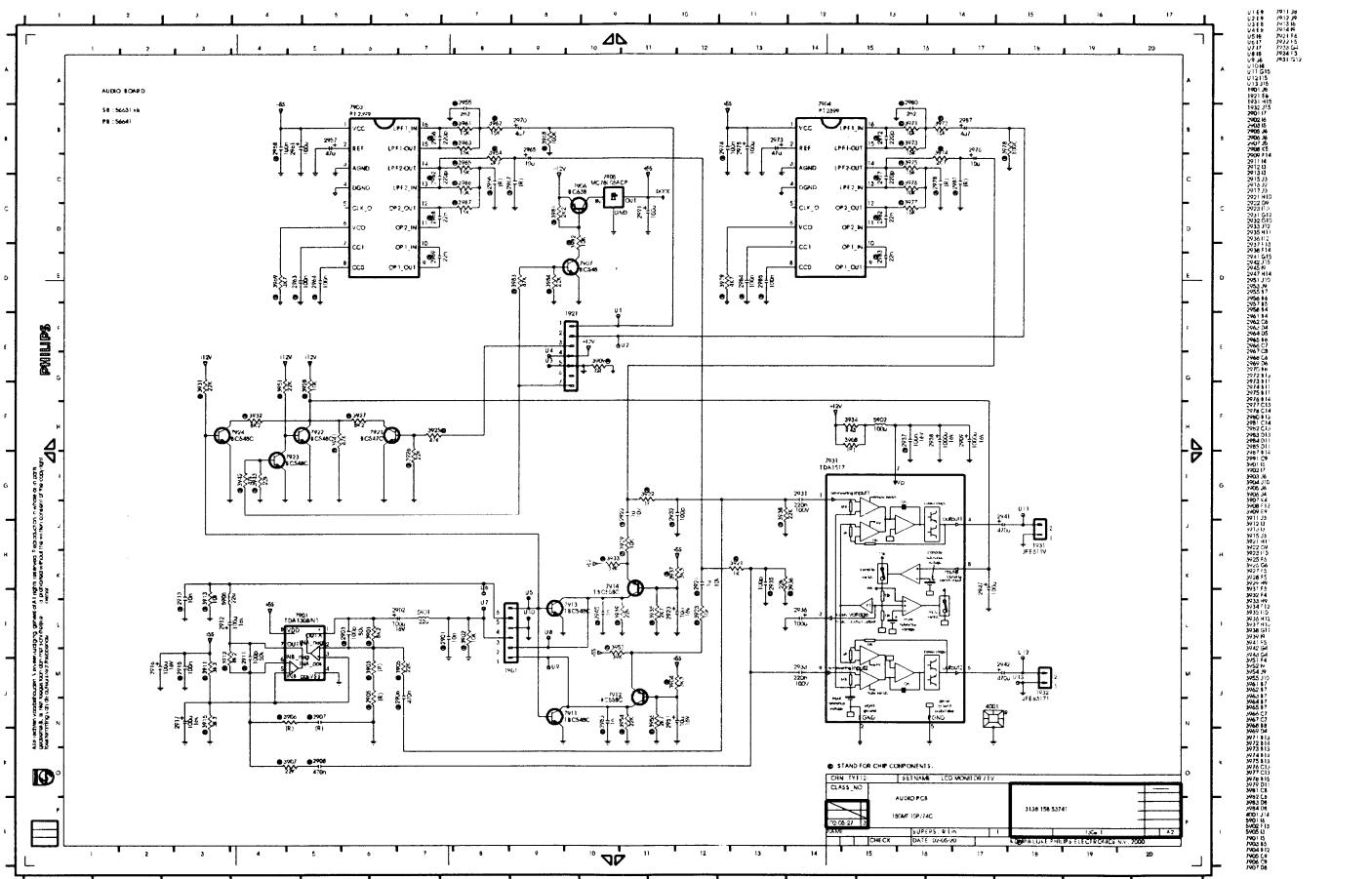


**Sound Board (C.B.A)**



1901 B2 A  
1921 A1 B  
1931 B6 B  
2902 B3 B  
2903 B5 B  
2912 B3 B  
2916 B3 B  
2917 B4 B  
2923 B2 B  
2933 B5 B  
2936 B5 B  
2938 B5 B  
2941 B6 B  
2942 B6 B  
2943 B5 B  
2951 B1 B  
2957 A4 B  
2965 A5 B  
2970 A5 B  
2975 A3 B  
2976 A4 B  
2987 A3 B  
2991 A2 B  
3900 B5 B  
3904 B4 B  
4001 A4 B  
5901 B2 B  
5902 B4 B  
5905 B3 B  
7901 B3 B  
7903 A5 B  
7904 A4 B  
7905 A2 B  
7906 A1 B  
7907 B2 B  
7911 B2 B  
7912 B1 B  
7923 A1 B  
7924 B1 B  
7931 A4 B  
  
1901 B5 B  
1921 A6 B  
1931 B1 B  
2902 B1 B  
2909 B2 B  
2912 B4 B  
2916 B3 B  
2917 B3 B  
2923 B5 B  
2931 B2 B  
2933 B2 B  
2936 B2 B  
2937 B5 B  
2938 B4 B  
2945 A5 B  
2953 A5 A  
2956 A5 A  
2958 A5 A  
2962 A5 A  
2964 A6 A  
2966 A5 A  
2967 A5 A  
2968 A5 A  
2969 A5 A  
2973 A3 A  
2974 A3 A  
2977 A4 A  
2978 A4 A  
2980 A3 A  
2981 A3 A  
2982 A4 A  
2983 A4 A  
2984 A4 A  
2985 A4 A  
3901 B2 A  
3902 B2 A  
3903 B3 A  
3904 B2 A  
3905 B3 A  
3906 B4 A  
3907 B3 A  
3908 A1 A  
3911 B3 A  
3912 B3 A  
3913 B2 A  
3915 A4 A  
3921 B3 A  
3922 B3 A  
3925 B1 A  
3926 B2 A  
3927 B2 A  
3928 B1 A  
3929 B1 A  
3930 B1 A  
3931 B2 A  
3932 B1 A  
3933 B5 A  
3934 B2 A  
3936 B2 A  
3937 B5 A  
3938 B2 A  
3939 B2 A  
3941 B1 A  
3942 A1 A  
3943 A1 A  
3951 A1 A  
3952 B2 A  
3955 B1 A  
3961 A5 A  
3962 A5 A  
3963 A5 A  
3964 A5 A  
3965 A5 A  
3966 A5 A  
3967 A5 A  
3968 A5 A  
3969 A5 A  
3971 A3 A  
3972 A3 A  
3973 A4 A  
3974 A4 A  
3975 A4 A  
3976 A4 A  
3977 A4 A  
3978 A3 A  
3979 A4 A  
3981 A1 A  
3982 A1 A  
3983 A1 A  
3984 A2 A

**Audio PCB**

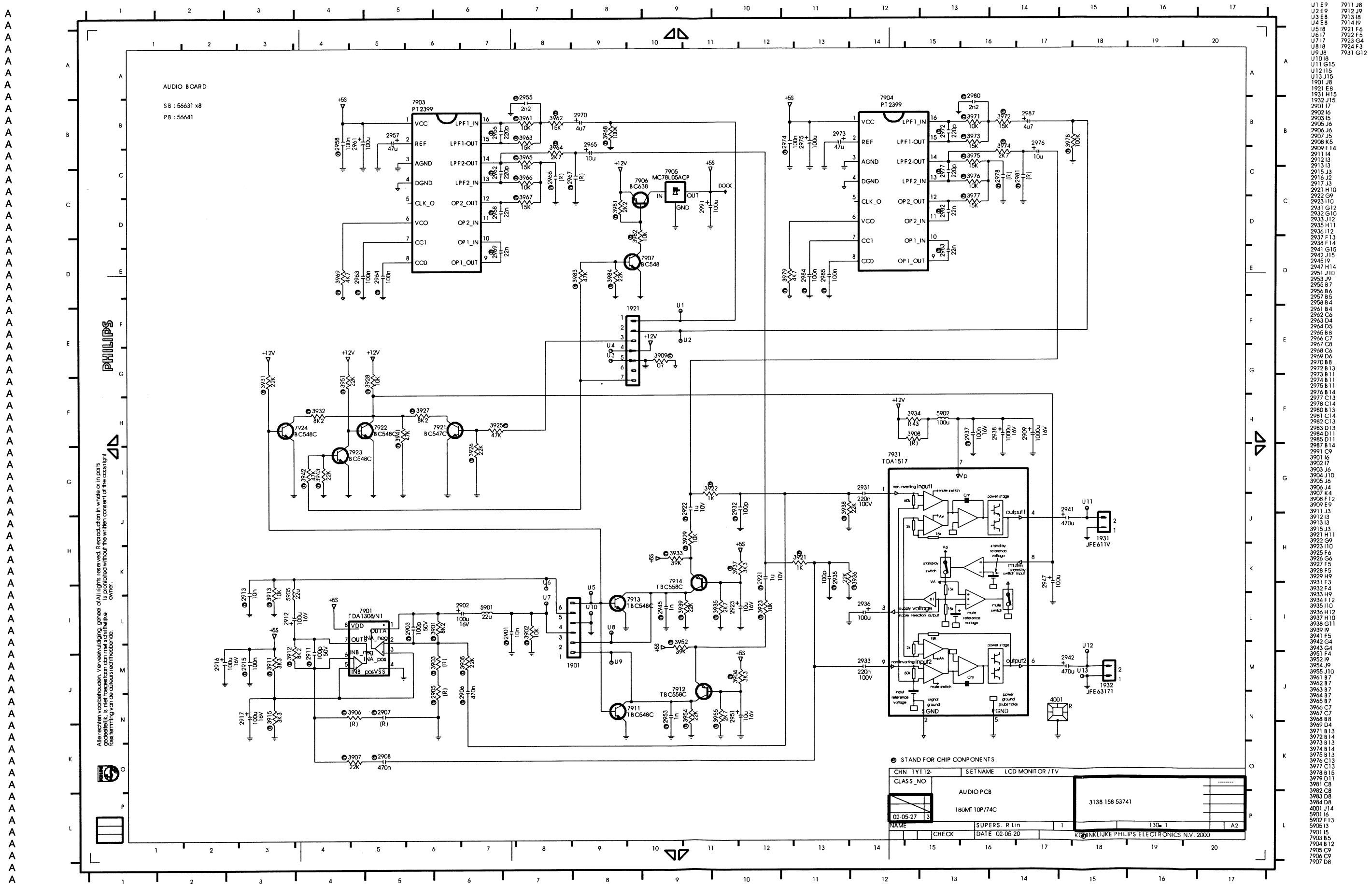


# Audio PCB

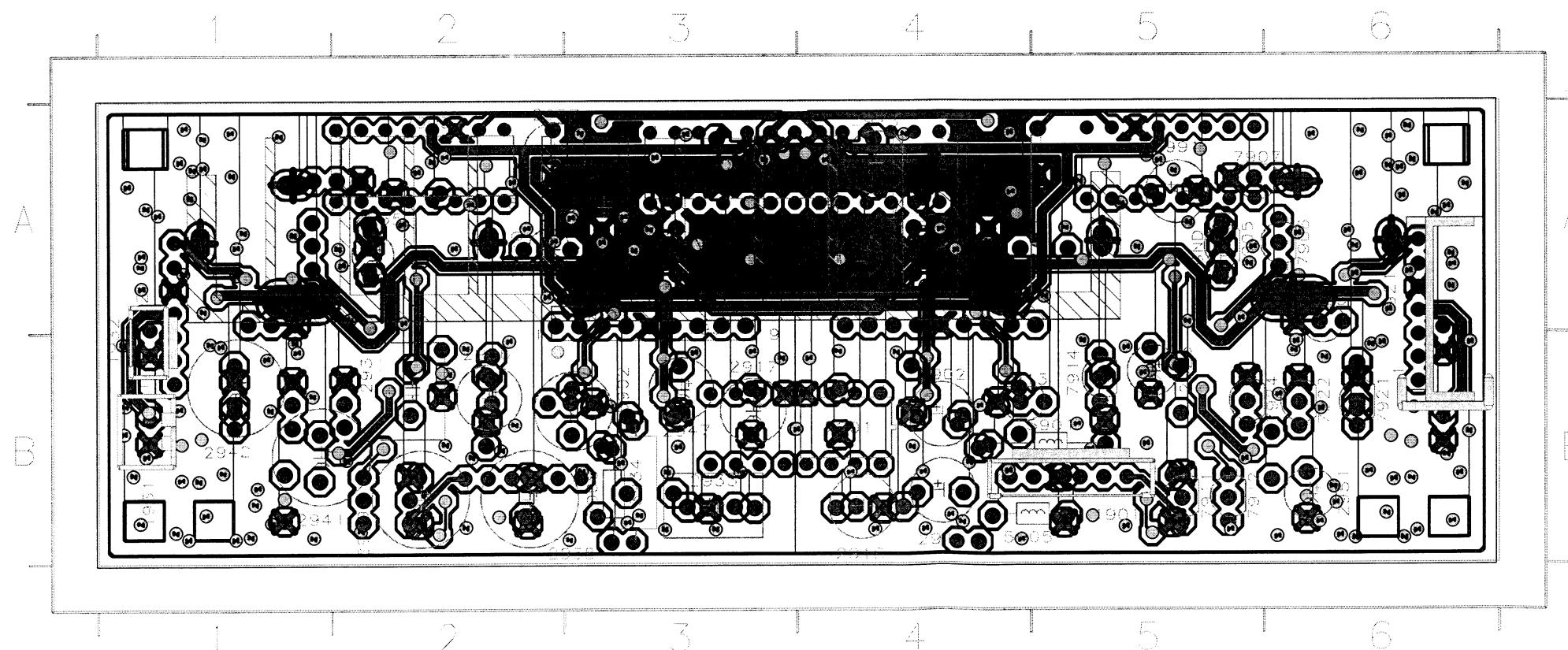
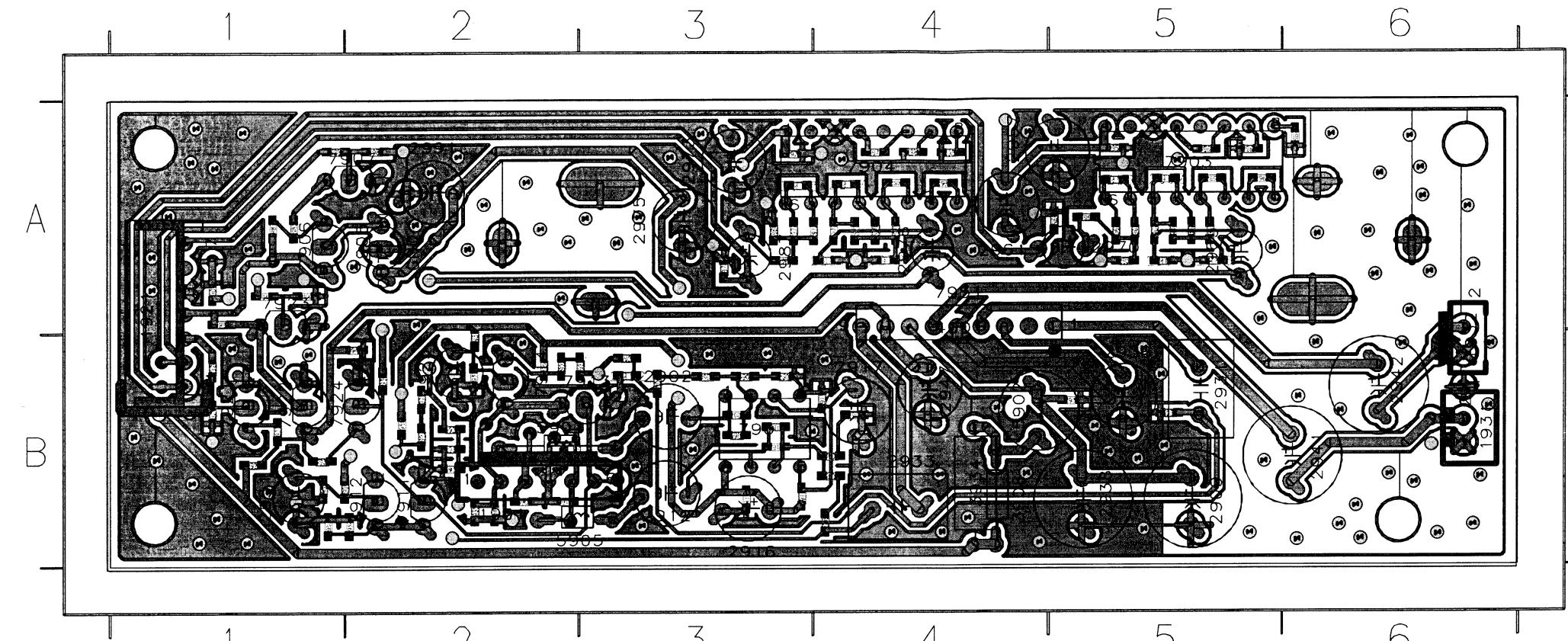
180MT10P LMT

49

 Go to cover page

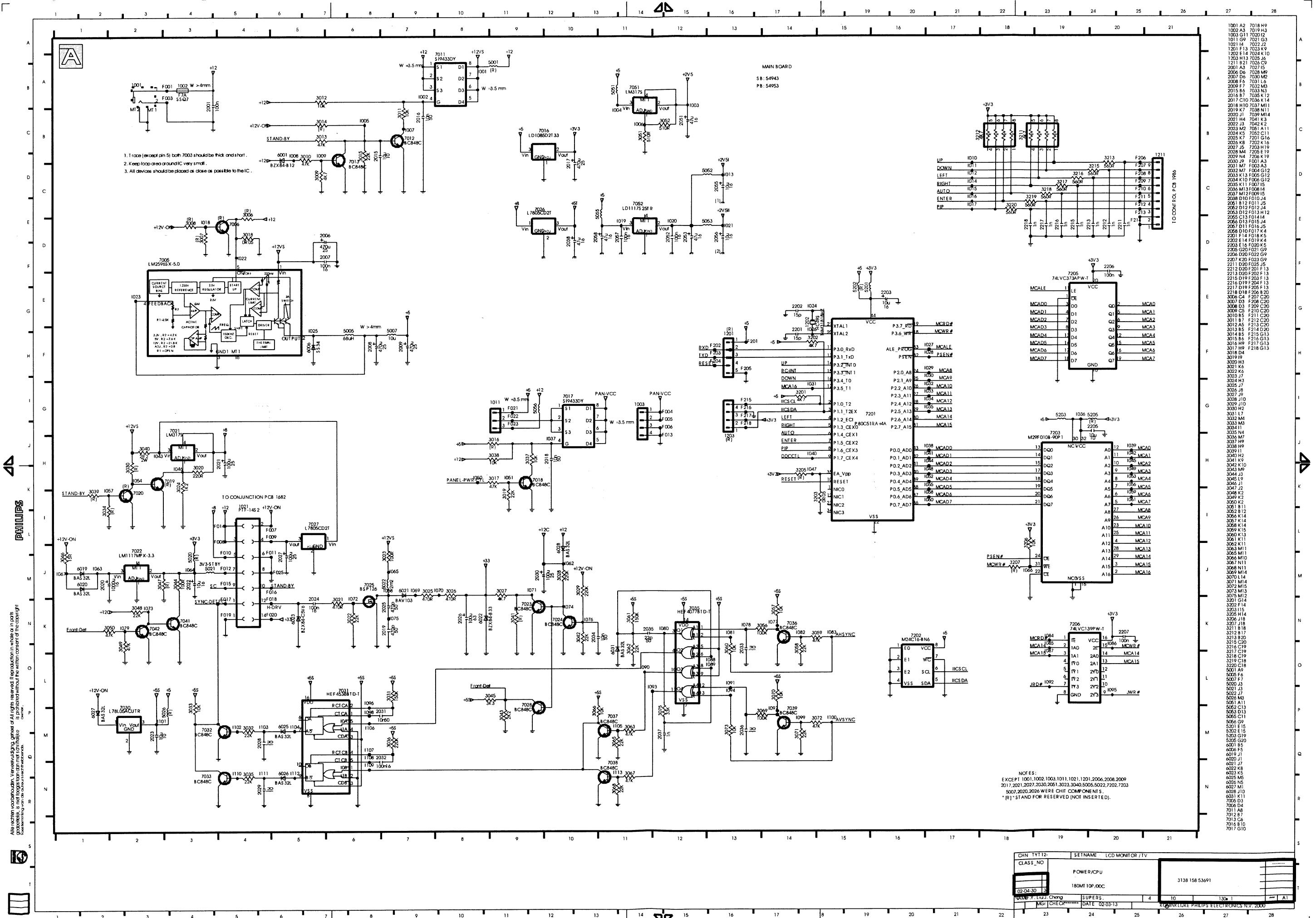


## Sound Board (C.B.A)



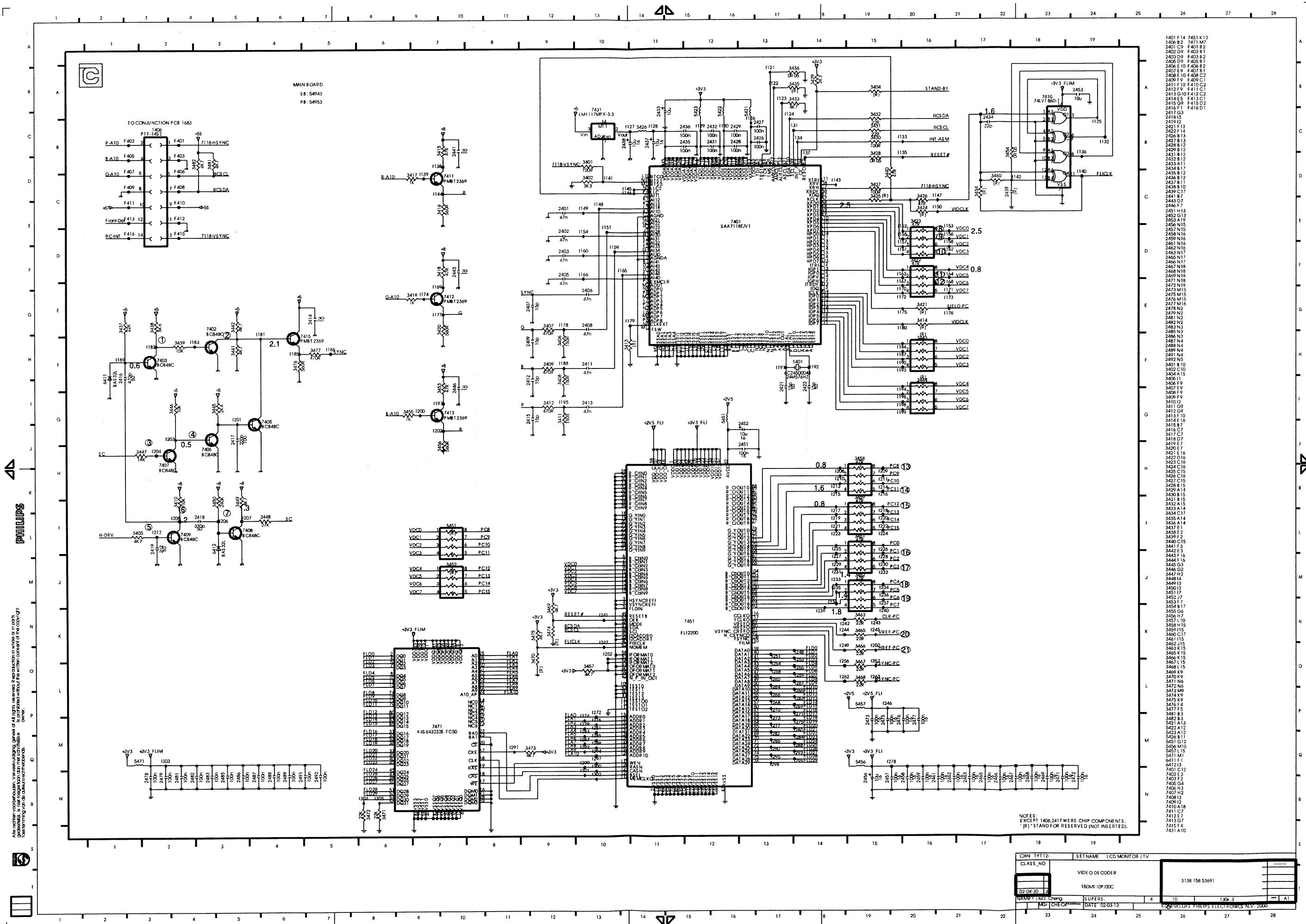
1901 B2	B	2901 B2	A
1921 A1	B	2903 B3	A
1931 B6	B	2905 B3	A
1932 B6	B	2906 B3	A
2902 B3	B	2907 B4	A
2909 B5	B	2908 B4	A
2912 B3	B	2911 B3	A
2916 B3	B	2913 B2	A
2917 B4	B	2915 B3	A
2923 B2	B	2921 B2	A
2931 B5	B	2922 B3	A
2933 B4	B	2932 B3	A
2936 B5	B	2935 B2	A
2938 B5	B	2937 B5	A
2941 B6	B	2945 B2	A
2942 B6	B	2953 B1	A
2947 B4	B	2955 A5	A
2951 B1	B	2956 A5	A
2957 A4	B	2958 A5	A
2961 A4	B	2962 A5	A
2965 A5	B	2963 A5	A
2970 A5	B	2964 A6	A
2973 A3	B	2966 A5	A
2975 A3	B	2967 A5	A
2976 A4	B	2968 A5	A
2987 A3	B	2969 A5	A
2991 A2	B	2972 A3	A
3908 B4	B	2974 A3	A
3934 B4	B	2977 A4	A
4001 A4	B	2978 A4	A
5901 B2	B	2980 A3	A
5902 B4	B	2981 A4	A
5905 B3	B	2982 A4	A
7901 B3	B	2983 A4	A
7903 A5	B	2984 A4	A
7904 A4	B	2985 A4	A
7905 A2	B	3901 B3	A
7906 A1	B	3902 B2	A
7907 A2	B	3903 B3	A
7911 B2	B	3904 B2	A
7912 B2	B	3905 B3	A
7913 B3	B	3906 B4	A
7914 B2	B	3907 B4	A
7921 B1	B	3909 A1	A
7922 B1	B	3911 B3	A
7923 A1	B	3912 B3	A
7924 B1	B	3913 B2	A
7931 A4	B	3915 B4	A
		3921 B2	A
		3922 B3	A
		3923 B2	A
		3925 B1	A
		3926 B1	A
		3927 B1	A
		3928 B1	A
		3929 B2	A
		3931 B2	A
		3932 B1	A
		3933 B2	A
		3935 B2	A
		3936 B2	A
		3937 B2	A
		3938 B5	A
		3939 B2	A
		3941 B2	A
		3942 A1	A
		3943 A1	A
		3951 A1	A
		3952 B2	A
		3954 B2	A
		3955 B1	A
		3961 A5	A
		3962 A5	A
		3963 A5	A
		3964 A5	A
		3965 A5	A
		3966 A5	A
		3967 A5	A
		3968 A5	A
		3969 A5	A
		3971 A3	A
		3972 A3	A
		3973 A4	A
		3974 A4	A
		3975 A4	A
		3976 A4	A
		3977 A4	A
		3978 A3	A
		3979 A4	A
		3981 A1	A
		3982 A1	A
		3983 A1	A
		3984 A2	A

# Schematic Diagram (MCU)



## Schematic Diagram (Video Decoder)

◀ Go to cover page

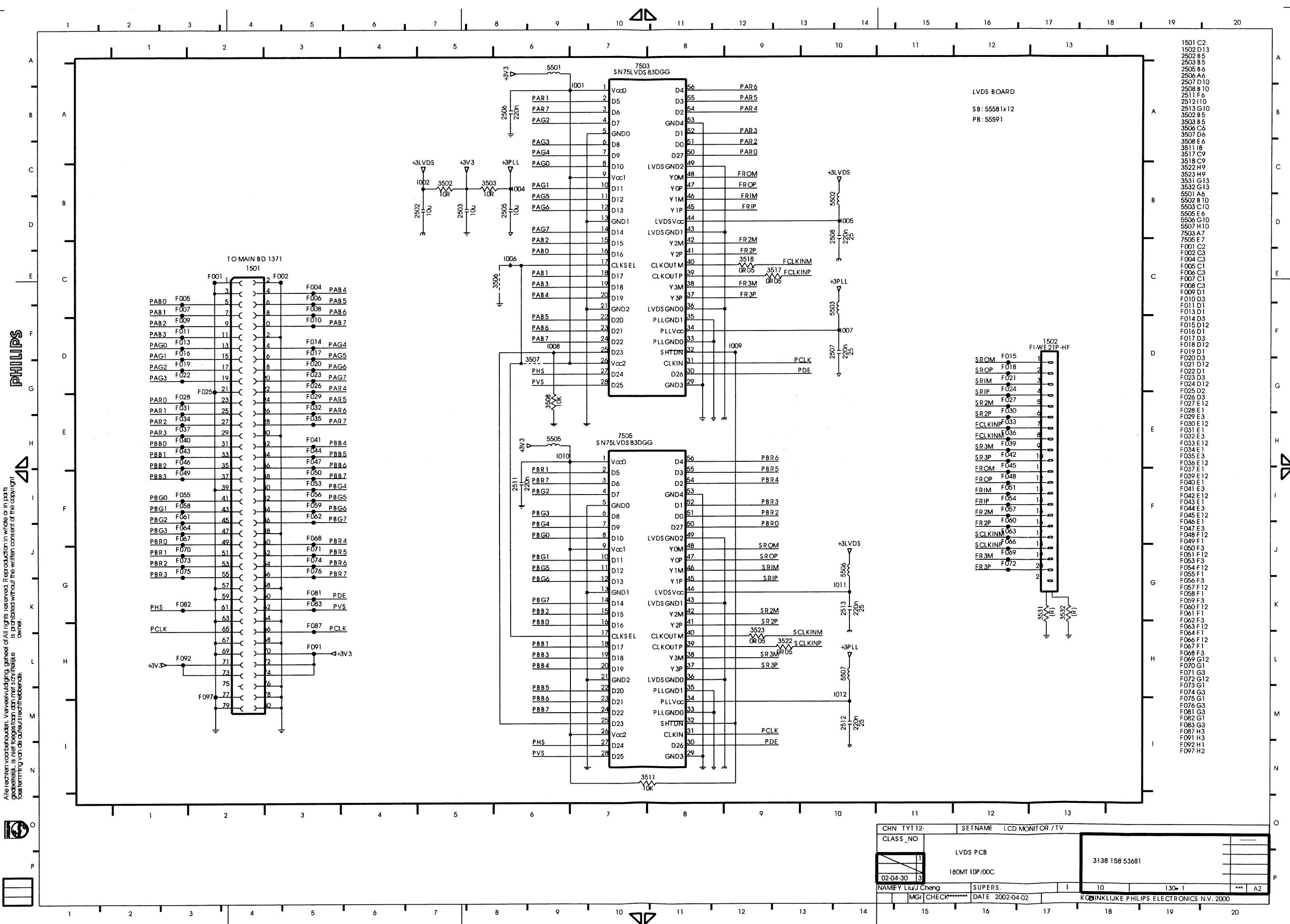


# Schematic Diagram (LVDS)

180MT10P LMT

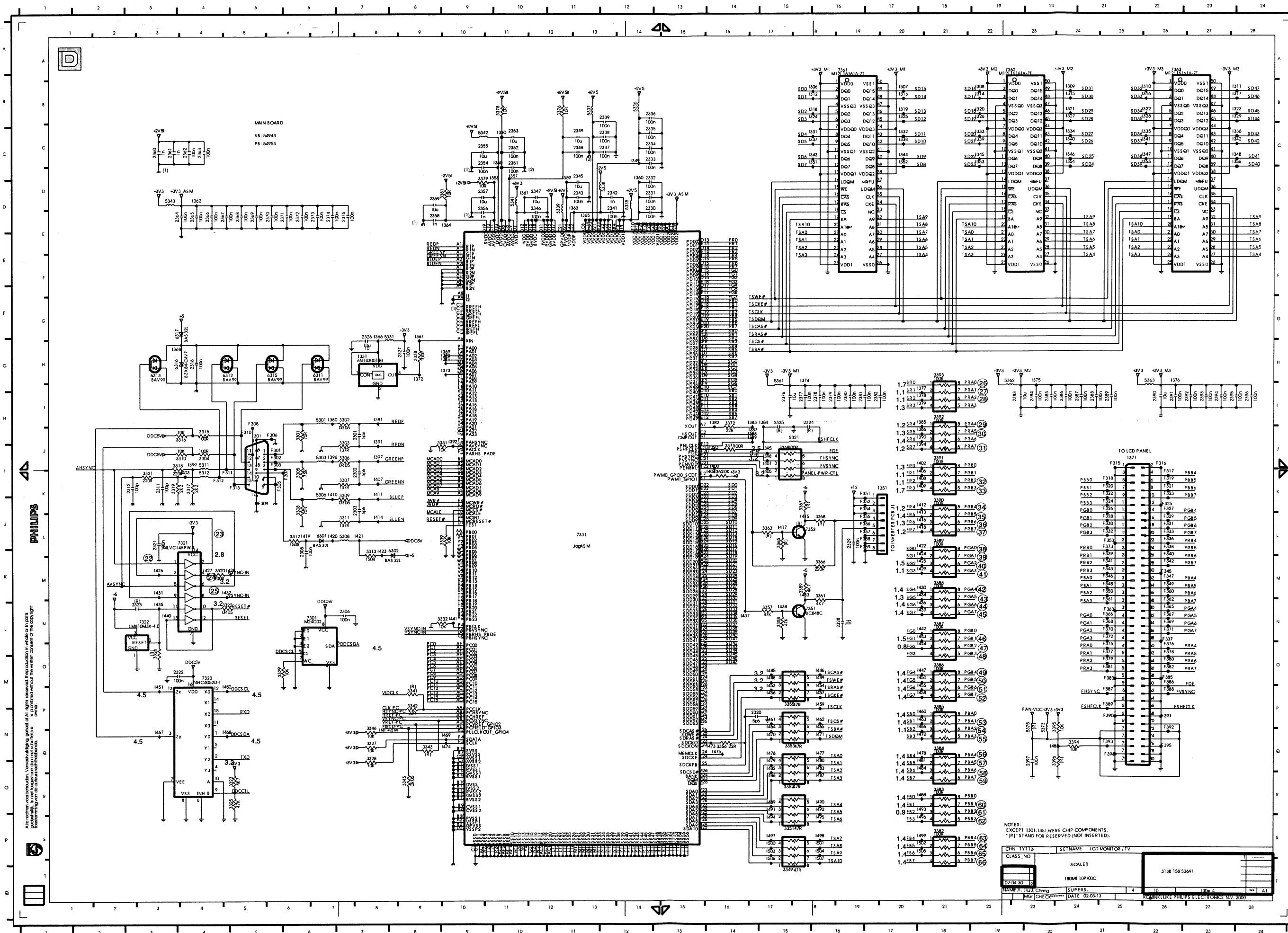
51

◀ Go to cover page

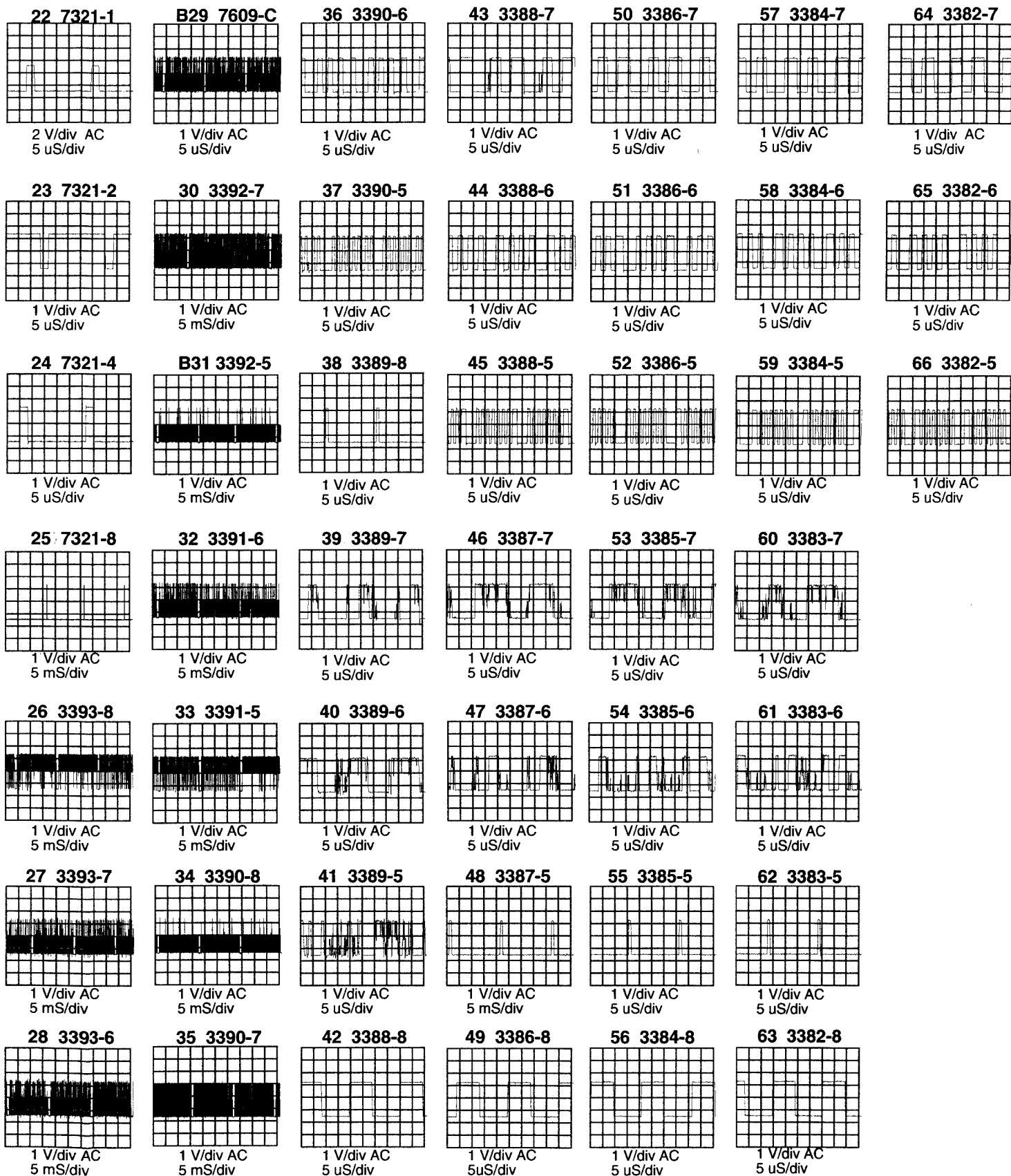


## Schematic Diagram (Scaler)

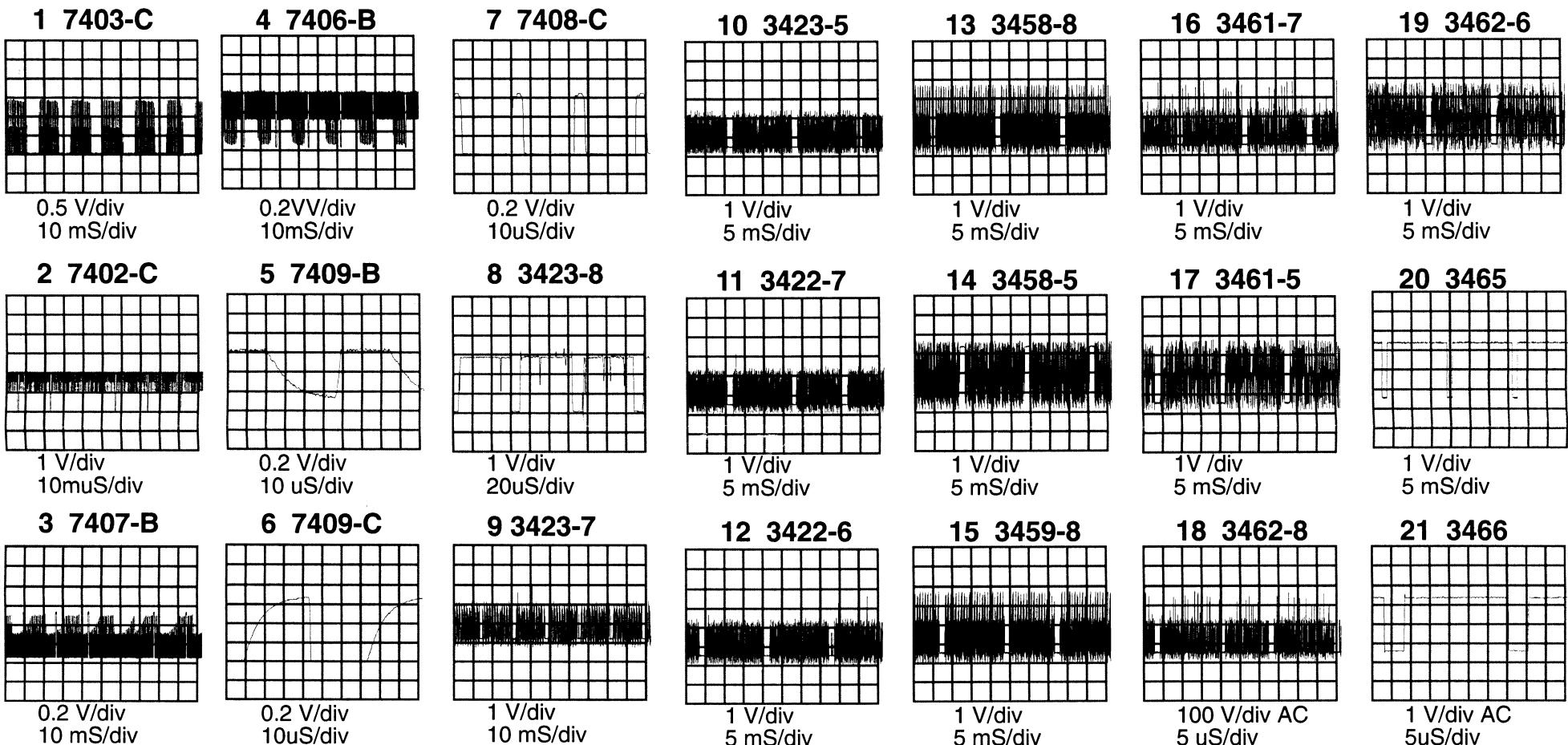
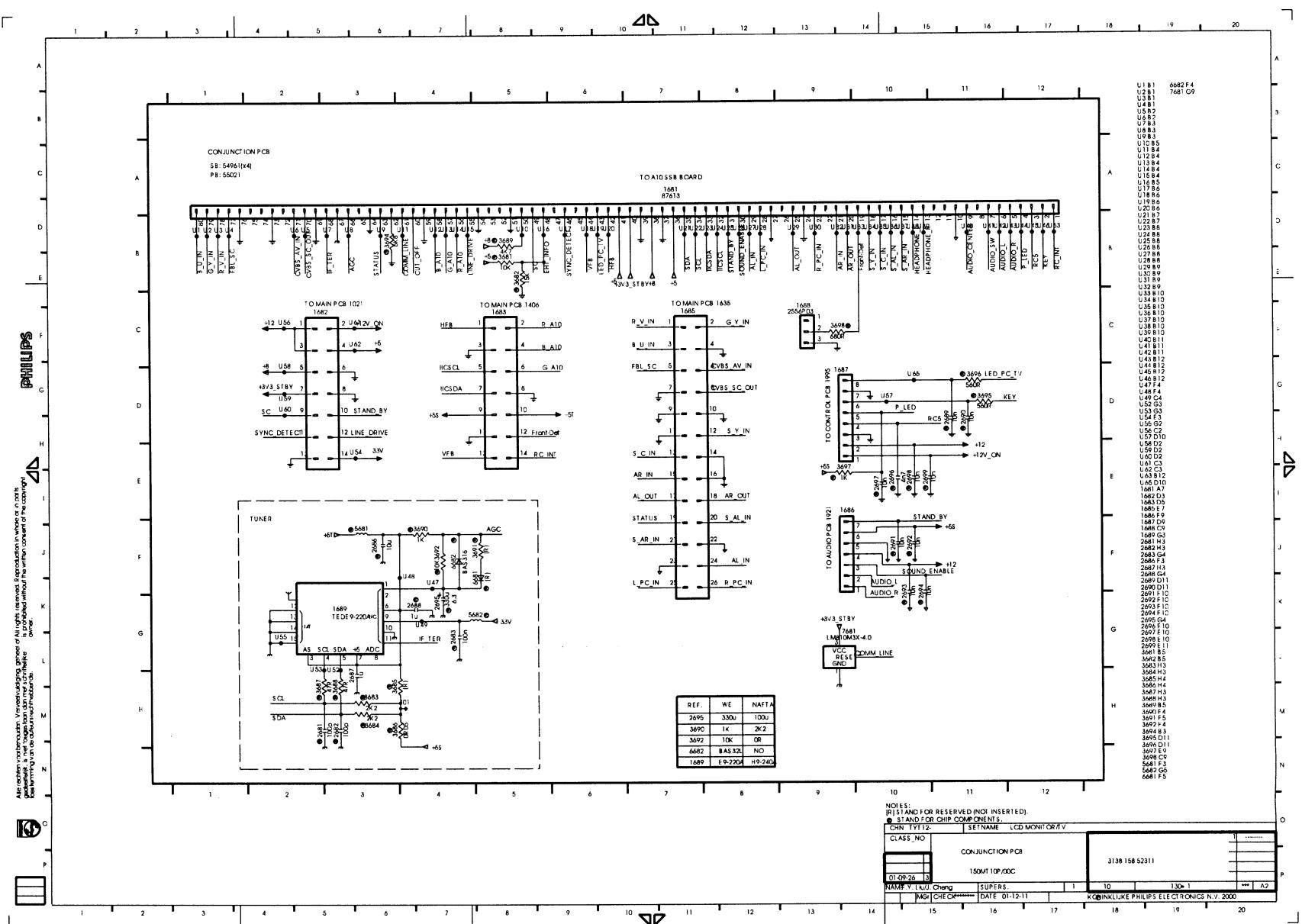
 Go to cover page



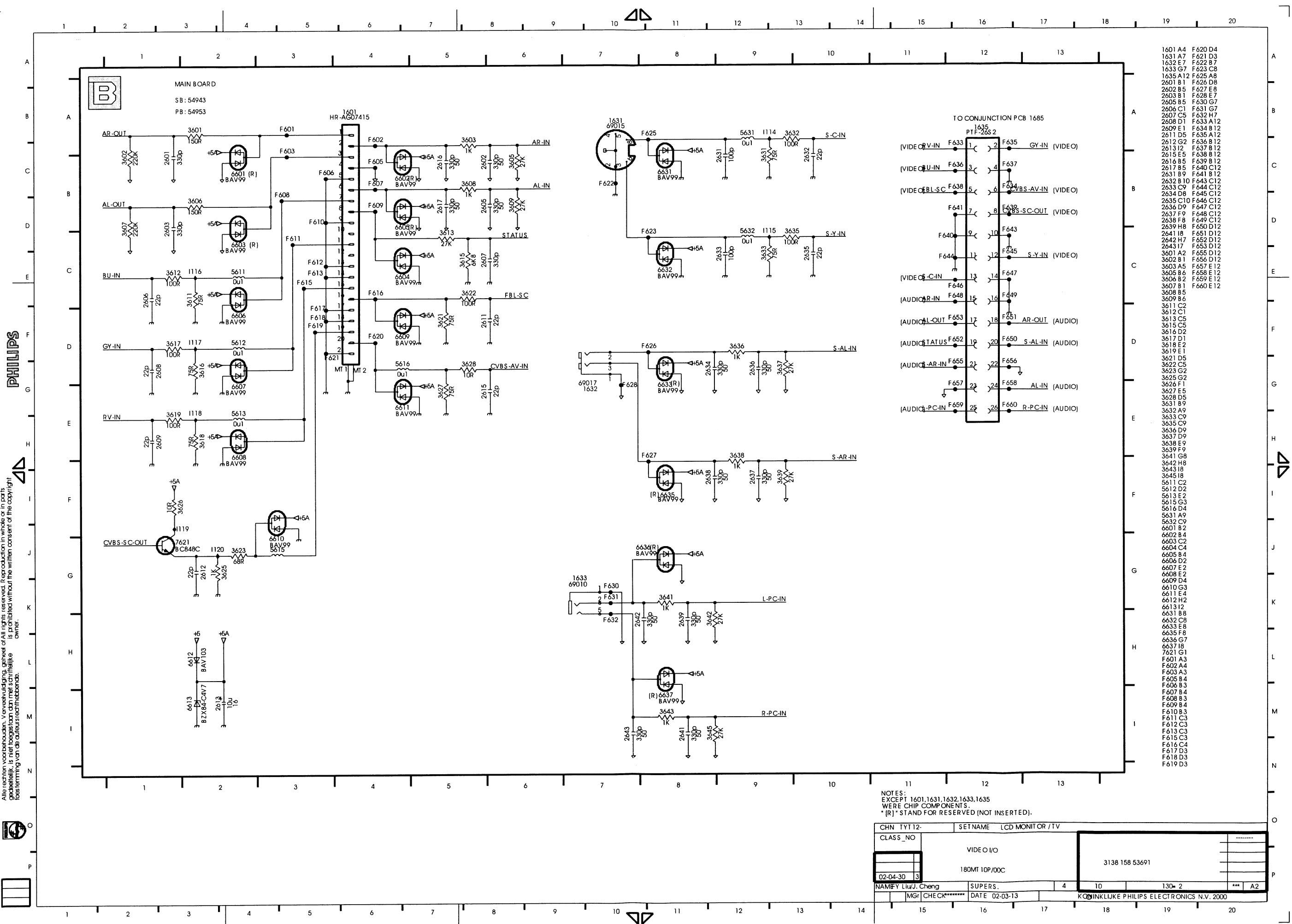
## Waveforms



## Schematic Diagram (Conjunction PCB)



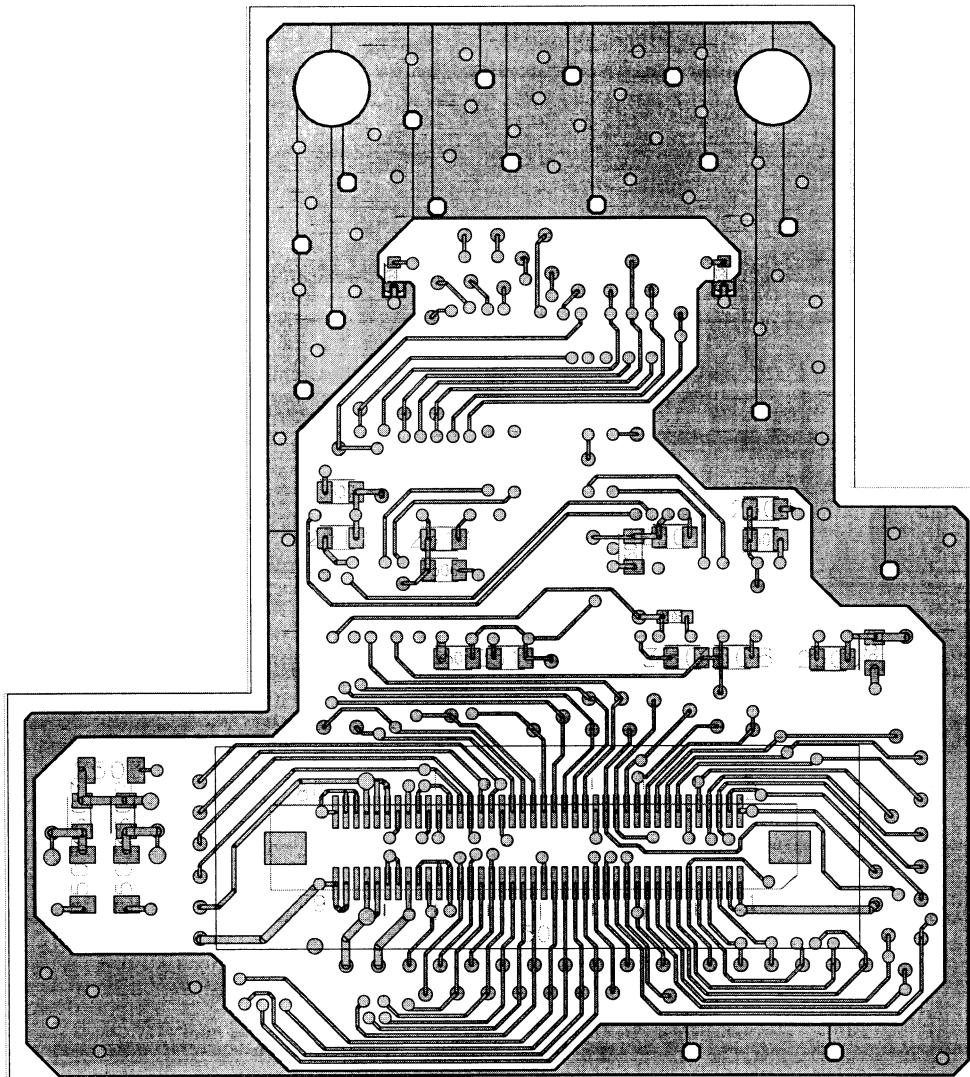
# Schematic Diagram (Video I/O)



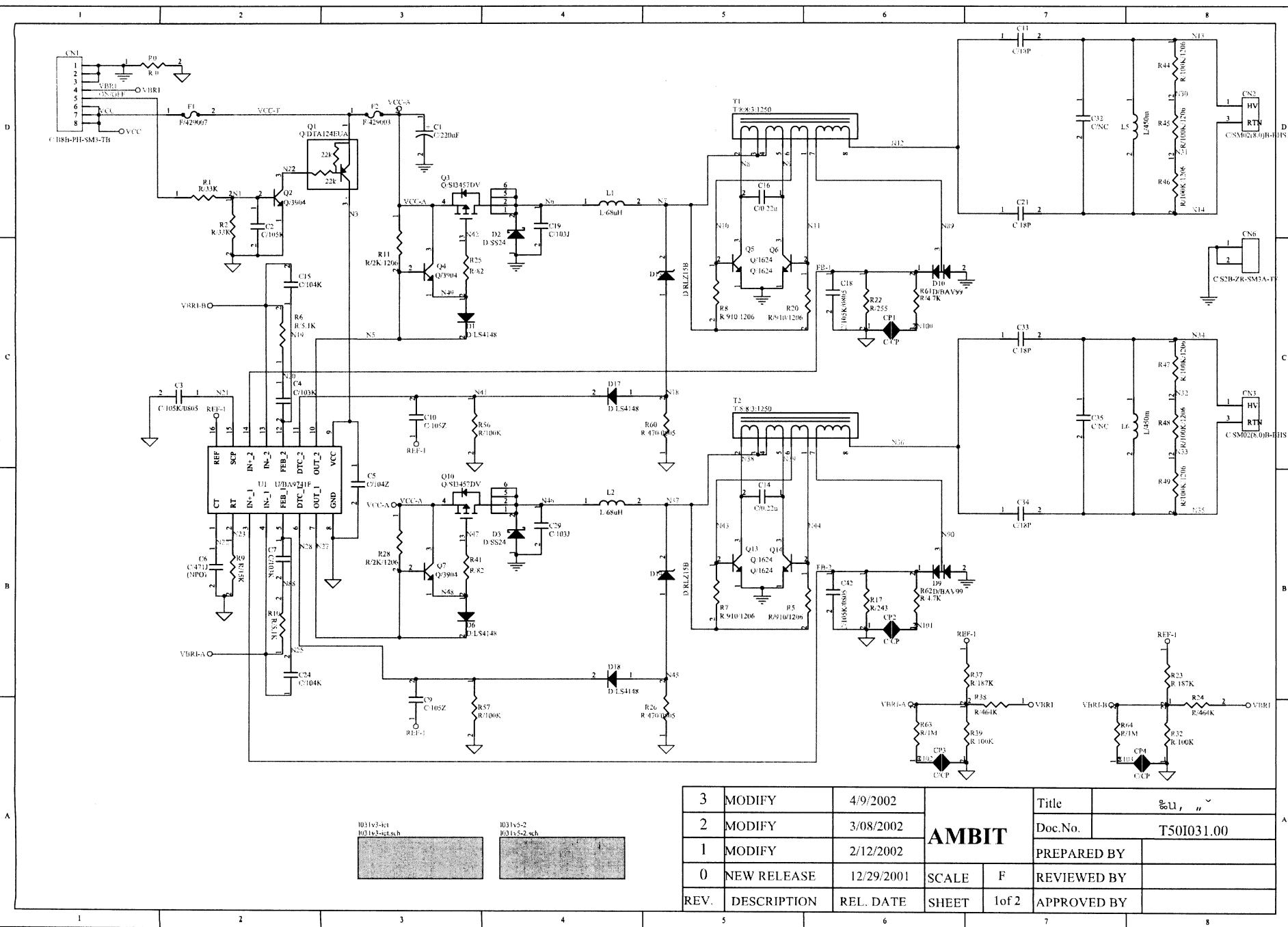
## LVDS C.B.A.

180MT10P LMT 53

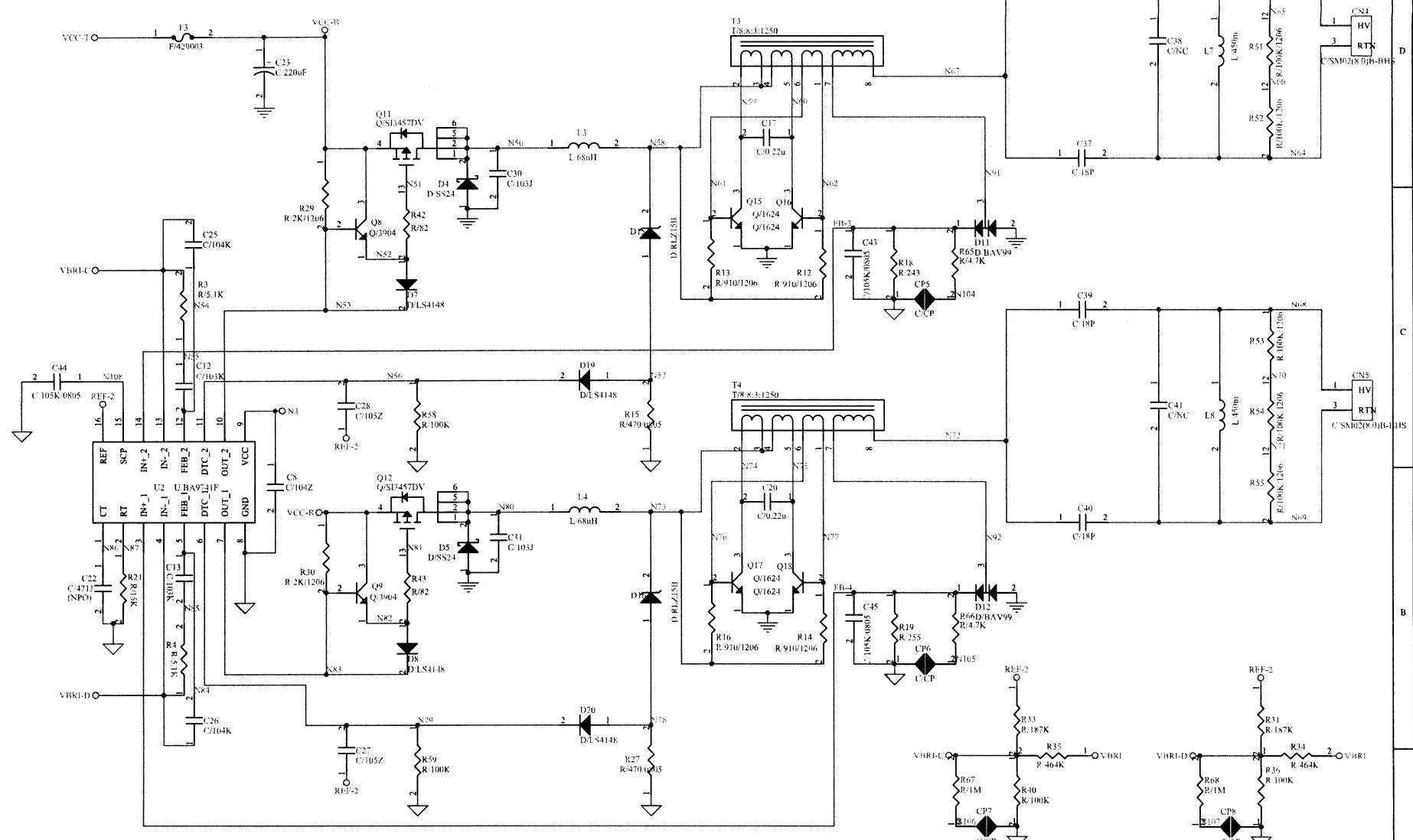
◀◀ Go to cover page



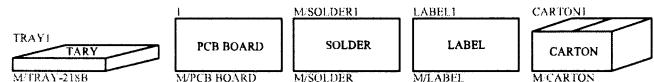
## Inverter Diagram



3	MODIFY	4/9/2002	AMBIT	Title	REV. U
2	MODIFY	3/08/2002		Doc.No.	T50I031.00
1	MODIFY	2/12/2002		PREPARED BY	
0	NEW RELEASE	12/29/2001		SCALE	F
REV.	DESCRIPTION	REL. DATE	SHEET	1 of 2	APPROVED BY



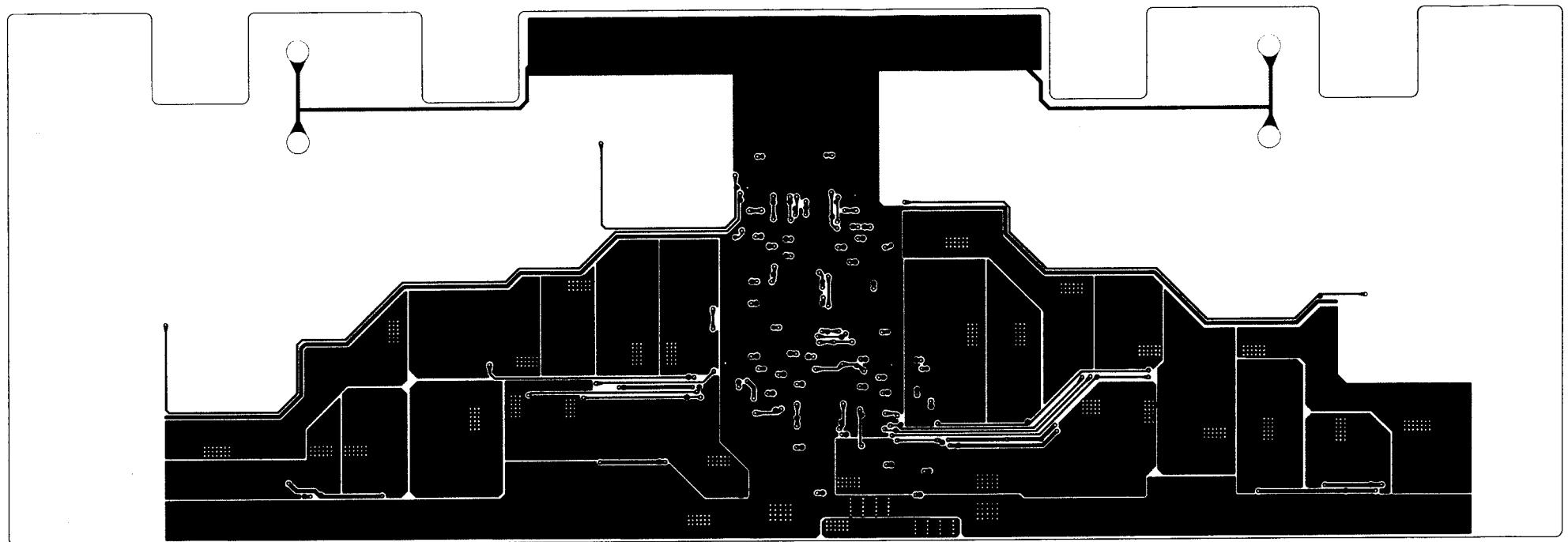
3	MODIFY	4/9/2002	Title	$\frac{1}{2}$ u, "	
2	MODIFY	3/08/2002		Doc.No.	T50I031.00
1	MODIFY	2/12/2002	AMBİT		
0	NEW RELEASE	12/29/2001	SCALE	F	REVIEWED BY
REV.	DESCRIPTION	REL. DATE	SHEET	2 of 2	APPROVED BY



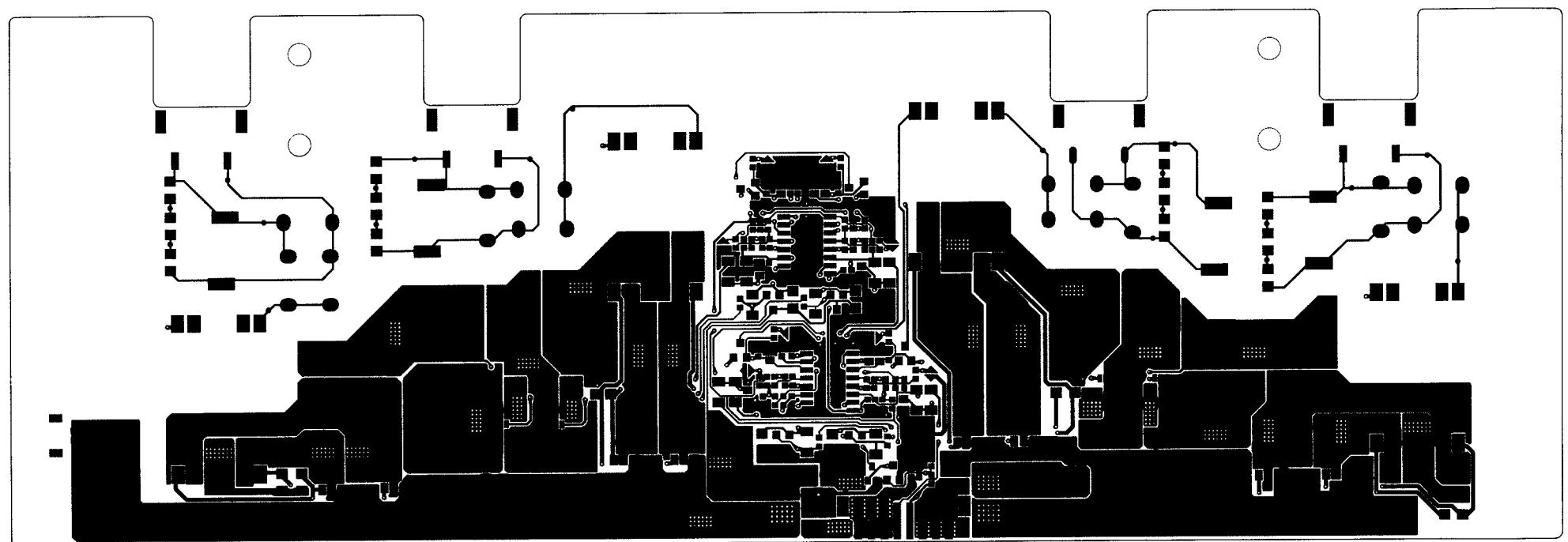
1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

## Inverter layout drawings

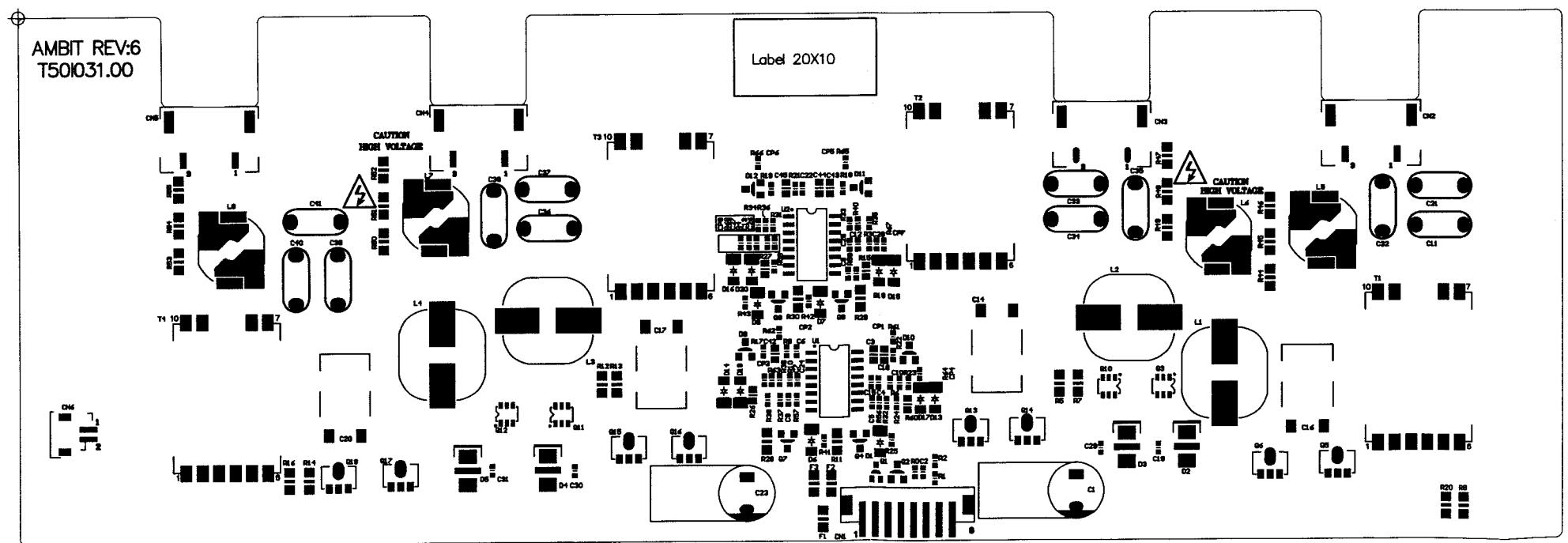
Bottom layer



Top layer



Top overlayer

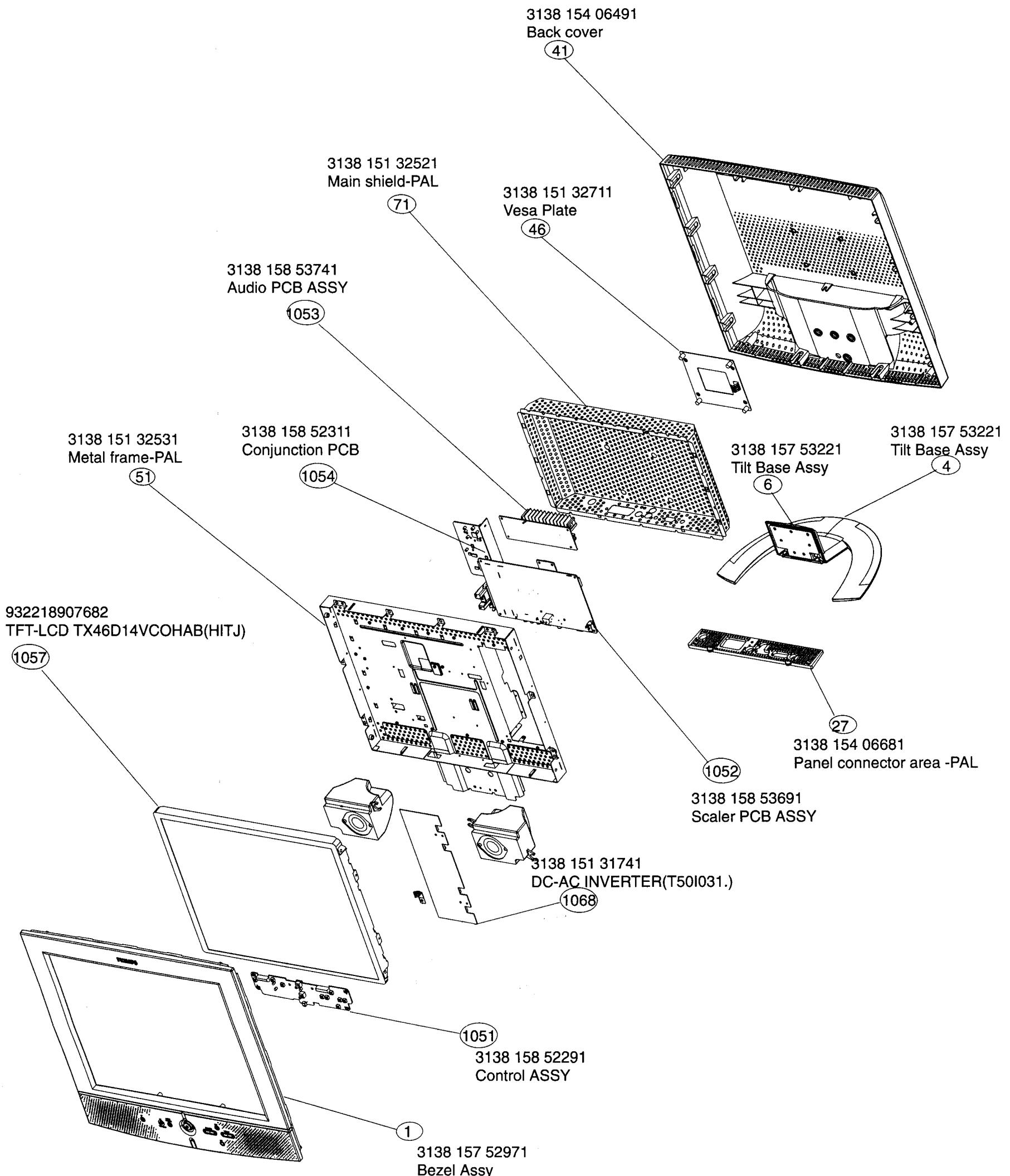


# Exploded View

180MT10P LMT

55

◀ Go to cover page



Go to cover page

**Model: 180MT10P/00C**

Item	Code Number	Description	
1	313815752971	BEZEL ASSY	823827712031 DC-AC INVERTER
2	138157532981	BACK COVER ASSY	C1 9965 000 14741 CAP. AL SC025M0220CBT 220uF/25v
4	313815753221	TILT BASE ASSY	C16 9965 000 14767 CAP. MPP R79GC3220ZA 0.22uF/160V
6	313815406671	BASE COVER	D2 9965 000 06330 DIODE SBD S24 SMA(GW)
7	313815404151	POWER KNOB	Q5 9965 000 14768 TR NPN 2SD1624T-TD SOT89/SANYO
30	313815555701	PLASTIC COVER	Q1 9965 000 05479 TR DTA124EUA
41	313815406491	BACK COVER	Q10 9965 000 05480 FET <1W SI3457DV/TSOP6
46	313815132711	VESA PLATE	U1 9965 000 06332 IC BA9741F SOP16(ROHM)
61	313815160741	BASE	Q9 9965 000 08855 TR NPN MMBT3904LT1SOT23(MOTO)
81	313815406471	BEZEL	T1 9965 000 14769 XFMR SIT08133-15A V:01(TMP)
82	313815406481	DECORATION	F1 9965 000 12325 FUSE 429007 7A(LITTEL)
141	313815520882	QUICK SETUP GUIDE	
450	313815632841	CARTON	
451	313815632821	EPE CUSHION-LEFT	
452	313815632831	EPE CUSHION-RIGHT	
453	313815620801	P.E.BAG-STAT.	
601	313811703663	E-D.F.U. ASSY	
602	313811703673	E-D.F.U	
1051	313815852291	CONTROL PCB ASSY	
1052	313815853691	SCALER PCB ASSY	
1053	313815853741	AUDIO PCB ASSY	
1054	313815852311	CONJUNCTION PCB ASSY	
1055	313815853721	PHONE JACK PCB ASSY	
1056	313815853681	LVDS PCB ASSY	
1057	932218907682	TFT-LCD TX46D14VCOHAB(HITJ)B	
1060	313812874931	MAINSCORD	
1062	313818872471	CORD PHONE 1M5 PHONE M BLK	
1064	313816878511	I/F CABLE	
1065	929900010137	BAT ZNC 1.5V R6/AA	
1066	313922889481	PRODUCT ASSY RC25107/PACKED	
1068	823827712031	DC-AC INVERTER(T50I031.)	
1069	823827712041	AC/DC ADAPTOR(SLS0111B12043)	
	313810610197	ROM assy with program (7203)	
	313810610200	EEPROM with program assy (7202)	
6994	932213169687	IR RECEIVER TSOP1836SS3V	
7011	932211529668	FET POW SM SI9433DY	
7201	935256600112	IC SM P80C51RA+4A	
7202	932212662682	IC M24C16-BN6	
7331	932217970671	IC SM JagASM	
7410	935209280118	IC SM 74LVT86D	
7431	932216733668	IC SMLD1117S33	
7451	932216918671	IC SM FLI22	
7471	932217603668	IC SM K4S643232E-TC50	

**Recommended Parts List**

◀ Go to cover page

MODEL: 180MT10P/00C	1686 313816879501 WAFER 7P	2331 223878615649 CER2 0603 X7R 16V 1N PM10 R
0001 313815752981 BACK COVER ASSY	1687 313816879511 CON JFE6338 8P VERT. ENTRY	2332 223878615649 CER2 0603 X7R 16V 1N PM10 R
0002 313815752971 BEZEL ASS'Y	1688 313816020021 HEADER 3X1 82540-0311	2333 223878615649 CER2 0603 X7R 16V 1N PM10 R
0004 313815753221 TILT BASEASSY	1689 242254290109 TUN V+U PLLIEG BG B	2334 223878615649 CER2 0603 X7R 16V 1N PM10 R
0006 313815406671 BASE COVER	1900 313815853761 AMP.TR.ASSY	2335 223878615649 CER2 0603 X7R 16V 1N PM10 R
0007 313815404151 POWER KNOB	1901 313818872311 CON BM V 6PM 2.5 A2502WR2	2336 223878615649 CER2 0603 X7R 16V 1N PM10 R
0027 313815406681 Panel connector area-PAL	1921 313816875191 7PIN WAFER 2.5MMPITCH	2337 223878615649 CER2 0603 X7R 16V 1N PM10 R
0030 313815555701 PLASTIC COVER	1931 243803100224 CON BM V 2PM 2.50 61142 B	2338 223878615649 CER2 0603 X7R 16V 1N PM10 R
0041 313815406491 BACK COVER	1932 243803100099 CON BM V 2PM 2.50 63171B	2339 223878615649 CER2 0603 X7R 16V 1N PM10 R
0046 313815132711 VESA PLATE	1942 313816876631 6P WAFER LTYPE (612661)	2341 223878615649 CER2 0603 X7R 16V 1N PM10 R
0051 313815132531 MAIN METALFRAME -PAL	1943 313816877251 EARPHONE JACK	2342 223858615623 CER2 0603 X7R 50V 1N PM10 R
0061 313815160741 BASE	1944 313816877251 EARPHONE JACK	2343 223878615649 CER2 0603 X7R 16V 1N PM10 R
0062 313815132651 HINGE ASSEMBLY	1986 313818872331 CON BM H 9PM 2.5 A2502WR2	2345 22224119876 CER2 1206 Y5V 10V 10U P8020R
0063 313815404421 SCREW COVER - BASE	1987 243812800196 SWI TACTH=5 GY 160GSKHHAM	2346 223878615649 CER2 0603 X7R 16V 1N PM10 R
0064 313815404571 RUBBER PAD-BASECENTER	1988 243812800196 SWI TACTH=5 GY 160GSKHHAM	2347 22224119876 CER2 1206 Y5V 10V 10U P8020R
0065 313815404761 RUBBER PAD-BASELEFT	1989 243812800196 SWI TACTH=5 GY 160GSKHHAM	2348 223878615649 CER2 0603 X7R 16V 1N PM10 R
0066 313815404771 RUBBER PAD - BASE RIGHT	1990 243812800196 SWI TACTH=5 GY 160GSKHHAM	2349 22224119876 CER2 1206 Y5V 10V 10U P8020R
0069 313815040251 SCREW - M4-0.7X8	1991 243812800196 SWI TACTH=5 GY 160GSKHHAM	2351 223878615649 CER2 0603 X7R 16V 1N PM10 R
0071 313815132521 Main Shield-PAL	1992 243812800196 SWI TACTH=5 GY 160GSKHHAM	2352 223878615649 CER2 0603 X7R 16V 1N PM10 R
0081 313815406471 BEZEL	1993 243812800196 SWI TACTH=5 GY 160GSKHHAM	2353 22224119876 CER2 1206 Y5V 10V 10U P8020R
0082 313815406481 DECORATION	1995 313818872301 CON BM H 8PM 2.5 A2502WR2	2354 223878615649 CER2 0603 X7R 16V 1N PM10 R
0083 313815404171 LENS - PC/TV	1996 242212802864 SWI PUSH 2P0.2A 30V ESB64B	2355 22224119876 CER2 1206 Y5V 10V 10U P8020R
0084 313815406691 LENS - IR	1998 243812800196 SWI TACTH=5 GY 160GSKHHAM	2356 223858615623 CER2 0603 X7R 50V 1N PM10 R
0086 313815406611 CONTROL KNOB -L	1999 242212802864 SWI PUSH 2P0.2A 30V ESB64B	2357 222224119876 CER2 1206 Y5V 10V 10U P8020R
0087 313815406621 CONTROL KNOB -R		2358 223858615623 CER2 0603 X7R 50V 1N PM10 R
0089 313810040981 HI-LO SCREW 3.5X9		2359 22224119876 CER2 1206 Y5V 10V 10U P8020R
0133 313810632613 PE BAG		2360 223858615623 CER2 0603 X7R 50V 1N PM10 R
0140 313800990381 PROCESS BOX		2361 223858615623 CER2 0603 X7R 50V 1N PM10 R
0141 313815520882 QUICK SETUP GUIDE		2362 223878615649 CER2 0603 X7R 16V 1N PM10 R
0221 313810355591 LVDS PCB-MULTI		2363 223878615649 CER2 0603 X7R 16V 1N PM10 R
0230 313800990541 PROCESS BOX		2364 223878615649 CER2 0603 X7R 16V 1N PM10 R
0248 313800990541 PROCESS BOX		2365 223878615649 CER2 0603 X7R 16V 1N PM10 R
0249 313800990541 PROCESS BOX		2366 223878615649 CER2 0603 X7R 16V 1N PM10 R
0279 313800990551 PROCESS BOX		2367 223878615649 CER2 0603 X7R 16V 1N PM10 R
0287 313800990051 PROCESS BOX		2368 223878615649 CER2 0603 X7R 16V 1N PM10 R
0288 313800990561 PROCESS BOX		2369 223878615649 CER2 0603 X7R 16V 1N PM10 R
0450 313815632841 CARTON	2001 223878615649 CER2 0603 X7R 16V 1N PM10 R	2370 223878615649 CER2 0603 X7R 16V 1N PM10 R
0451 313815632821 EPE CUSHION - LEFT	2006 203803516304 ELCAP RXJ 25VS 470U PM20 B	2371 223878615649 CER2 0603 X7R 16V 1N PM10 R
0452 313815632831 EPE CUSHION - RIGHT	2007 223878615649 CER2 0603 X7R 16V 1N PM10 R	2372 223878615649 CER2 0603 X7R 16V 1N PM10 R
0453 313815620801 L.P.E.BAG-STAT.	2008 203803516304 ELCAP RXJ 25VS 470U PM20 B	2373 223878615649 CER2 0603 X7R 16V 1N PM10 R
0454 122210033005 TAPE ADH CELLOPH 19MM TRP	2009 203803516304 ELCAP RXJ 25VS 470U PM20 B	2374 223878615649 CER2 0603 X7R 16V 1N PM10 R
0455 123810078007 TAPE S-ADHPP 0.065X75MM NT	2015 22224119876 CER2 1206 Y5V 10V 10U P8020R	2375 223878615649 CER2 0603 X7R 16V 1N PM10 R
0500 083802600004 LLDPW WRAP	2016 223858615636 CER2 0603 X7R 50V 10N PM10 R	2376 22224119876 CER2 1206 Y5V 10V 10U P8020R
0501 283880090207 PALLET	2017 203803516304 ELCAP RXJ 25VS 470U PM20 B	2377 223878615649 CER2 0603 X7R 16V 1N PM10 R
0503 313810651051 CARD BOARD	2018 223858615636 CER2 0603 X7R 50V 10N PM10 R	2378 223878615649 CER2 0603 X7R 16V 1N PM10 R
0504 313810600601 FAMILYSHEET - W/OADH.	2019 223886715471 CER1 0603 NP050V 470P PM5 R	2379 223878615649 CER2 0603 X7R 16V 1N PM10 R
0505 313815633731 SLIP SHEET	2020 202203100071 ELCAP KM 16VS 10U PM20 B	2380 223878615649 CER2 0603 X7R 16V 1N PM10 R
0601 313811703663 E-D.F.U ASSY	2021 202203100071 ELCAP SK 25VS 1U PM20 B	2381 223878615649 CER2 0603 X7R 16V 1N PM10 R
0602 313811703673 E-D.F.U	2022 202002191725 ELCAP SM RVS 16V 10U PM20R	2382 223878615649 CER2 0603 X7R 16V 1N PM10 R
0615 313811704351 HEX CODE OF S/W(NOMATL REQ)	2023 22224119876 CER2 1206 Y5V 10V 10U P8020R	2383 222224119876 CER2 1206 Y5V 10V 10U P8020R
1001 242202605309 SOC SUPP H1P FDC 2.5MM L	2024 223878615649 CER2 0603 X7R 16V 1N PM10 R	2384 223878615649 CER2 0603 X7R 16V 1N PM10 R
1002 242208611053 FUSE SM F 7A 125V UL R	2025 223886715471 CER1 0603 NP050V 470P PM5 R	2385 223878615649 CER2 0603 X7R 16V 1N PM10 R
1003 313816872041 CON BM V 4PMM24264	2026 2038035161605 ELCAP REA 63V S 1U PM20B	2386 223878615649 CER2 0603 X7R 16V 1N PM10 R
1011 313816020021 HEADER 3X1 82540-0311	2027 202203100071 ELCAP SK 25VS 1U PM20 B	2387 223878615649 CER2 0603 X7R 16V 1N PM10 R
1012 313816020291 JUMPER (BLACK)	2028 223824619863 CER2 0603 Y5V 10V 1U P8020 R	2388 223878615649 CER2 0603 X7R 16V 1N PM10 R
1021 313818872321 CON BM V 14PF 2.0	2029 223824619863 CER2 0603 Y5V 10V 1U P8020 R	2389 223878615649 CER2 0603 X7R 16V 1N PM10 R
1051 313815852291 CONTROL PCB ASSY	2030 20220310071 ELCAP SK 25VS 1U PM20 B	2390 22224119876 CER2 1206 Y5V 10V 10U P8020R
1052 313815853691 SCALER PCB ASSY	2031 223858615636 CER2 0603 X7R 50V 10N PM10 R	2391 223878615649 CER2 0603 X7R 16V 1N PM10 R
1053 313815853741 AUDIO PCB ASSY	2032 223878615649 CER2 0603 X7R 16V 1N PM10 R	2392 223878615649 CER2 0603 X7R 16V 1N PM10 R
1054 313815852311 CONJUNCTION PCB ASSY	2033 223824619863 CER2 0603 Y5V 10V 1U P8020 R	2393 223878615649 CER2 0603 X7R 16V 1N PM10 R
1055 313815853721 PHONE JACK PCB ASSY	2034 223824619863 CER2 0603 Y5V 10V 1U P8020 R	2394 223878615649 CER2 0603 X7R 16V 1N PM10 R
1056 313815853681 LVDS PCBASSY	2035 223886715229 CER1 0603 NP050V 22P PM5 R	2395 223878615649 CER2 0603 X7R 16V 1N PM10 R
1057 922218907682 TFT-LCD TX46D14VC0HAB (HTJ)	2036 223824619863 CER2 0603 Y5V 10V 1U P8020 R	2396 223878615649 CER2 0603 X7R 16V 1N PM10 R
1060 313812874931 MAINSCORD	2037 223858615623 CER2 0603 X7R 50V 10N PM10 R	2397 223878615649 CER2 0603 X7R 16V 1N PM10 R
1062 313818872471 CORD PHONE 1M5 PHONE M BLK	2038 20020191726 ELCAP SM RVS 16V 47U PM20R	2401 223878615645 CER2 0603 X7R 16V 47N PM10 R
1064 313816878511 IF CABLE	2039 20020191726 ELCAP SM RVS 16V 47U PM20R	2402 223878615645 CER2 0603 X7R 16V 47N PM10 R
1065 929900010137 BAT ZNC1.5V R6/AA 2-PACK Y	2040 20020191726 ELCAP SM RVS 16V 10U PM20R	2403 223878615645 CER2 0603 X7R 16V 47N PM10 R
1066 313922889481 PRODUCT ASSY RC25107/packed	2045 20020191726 ELCAP SM RVS 16V 10U PM20R	2405 223878615645 CER2 0603 X7R 16V 47N PM10 R
1067 823827712051 LSP BOX 4R3W L/R (PH-18LCD)	2056 202001293721 ELCAP SM RV2 16V 10U PM20R	2406 223878615645 CER2 0603 X7R 16V 47N PM10 R
1068 823827712031 DC-AC INVERTER(T501031)	2057 223878615649 CER2 0603 X7R 16V 1N PM10 R	2407 223886715159 CER1 0603 NP050V 15P PM5 R
1069 823827712041 AC/DC ADAPTER(SLS011B12043)	2058 202001293723 ELCAP SM RV2 16V 47U PM20R	2408 223878615645 CER2 0603 X7R 16V 47N PM10 R
1163 313814971251 BB IF TERRESTRIAL	2053 202001293723 ELCAP SM RV2 16V 47U PM20R	2409 223886715159 CER1 0603 NP050V 15P PM5 R
1164 313814973191 BB POWER CONVERSION	2055 202001293721 ELCAP SM RV2 16V 10U PM20R	2411 223878615645 CER2 0603 X7R 16V 47N PM10 R
1165 313814973201 BB DISPLAYPRESENTATION	2056 202001293721 ELCAP SM RV2 16V 10U PM20R	2412 223886715159 CER1 0603 NP050V 15P PM5 R
1166 313814973221 BB SOUND PRESENTATION	2057 223878615649 CER2 0603 X7R 16V 1N PM10 R	2413 223878615645 CER2 0603 X7R 16V 47N PM10 R
1167 313814971291 BB ACCESSORY	2058 202001293723 ELCAP SM RV2 16V 47U PM20R	2414 223824619863 CER2 0603 Y5V 10V 1U P8020 R
1168 313814971311 BB MAINS CORD	2201 223886715159 CER1 0603 NP050V 15P PM5 R	2415 223886715159 CER1 0603 NP050V 15P PM5 R
1169 313814973211 BB REMAINING WIRE ASSY	2202 223886715159 CER1 0603 NP050V 15P PM5 R	2416 223886714471 CER1 0603 NP050V 470P PM2 R
1170 313913725771 BB-WEU-CM-HIS-1-SA-LCD	2203 202001293721 ELCAP SM RV2 16V 10U PM20R	2417 203803020313 CAP MPOL 1VS 220N PM2 B
1202 243854300093 RES XTL SM14M318 7P SMD49	2213 223858615623 CER2 0603 X7R 50V 1N PM10 R	2418 223886714331 CER1 0603 NP050V 330P PM2 R
1208 243803100146 SOC IC V 8P 2.54 DIL B	2215 223858615623 CER2 0603 X7R 50V 1N PM10 R	2419 223858615627 CER2 0603 X7R 50V 2N2 PM10 R
1209 313818872411 CON BM V 32PM 2.54 62075	2216 223858615623 CER2 0603 X7R 50V 1N PM10 R	2421 223886715159 CER1 0603 NP050V 15P PM5 R
1211 313818872441 CON BM V 9PM 2.0 M2426	2217 223858615623 CER2 0603 X7R 50V 1N PM10 R	2422 223886715159 CER1 0603 NP050V 15P PM5 R
1301 243803100046 CON BM PAN H 15PF SUB-D B	2218 223858615623 CER2 0603 X7R 50V 1N PM10 R	2426 223878615649 CER2 0603 X7R 16V 1N PM10 R
1331 243854300092 OSC XTL SM14M318 CXO6N R	2301 223886715568 CER1 0603 NP050V 5P6 PM0P5	2427 223878615649 CER2 0603 X7R 16V 1N PM10 R
1351 313816879511 CON JFE6338 8P VERT.ENTRY	2302 223886715568 CER1 0603 NP050V 5P6 PM0P5	2428 223878615649 CER2 0603 X7R 16V 1N PM10 R
1371 242202517152 CON BM V 80PF 0.6 52760L	2303 223886715568 CER1 0603 NP050V 5P6 PM0P5	2429 223878615649 CER2 0603 X7R 16V 1N PM10 R
1401 243854300096 RES XTL SM24M576 16P SMD-49R	2305 223878615649 CER2 0603 X7R 16V 1N PM10 R	2431 223878615649 CER2 0603 X7R 16V 1N PM10 R
1406 313818872321 CON BM V 14PF 2.0	2306 223878615649 CER2 0603 X7R 16V 1N PM10 R	2432 223878615649 CER2 0603 X7R 16V 1N PM10 R
1501 823827703391 CON .MOLEX-53481	2311 223886715101 CER1 0603 NP050V 1P PM5 R	2433 202001293721 ELCAP SM RV2 16V 10U PM20
1502 313816875171 CONN FI-TWE21P-HF	2312 223886715101 CER1 0603 NP050V 1P PM5 R	2434 223886715229 CER1 0603 NP050V 22P PM5 R
1601 242202517621 SOC EURO H 21PF SHD L-GND Y	2316 223878615649 CER2 0603 X7R 16V 1N PM10 R	2435 223878615649 CER2 0603 X7R 16V 1N PM10 R
1631 243803100431 SOC MDIN H 4PF 69015 B	2320 223886715568 CER1 0603 NP050V 5P6 PM0P5	2436 223878615649 CER2 0603 X7R 16V 1N PM10 R
1632 243803100428 SOC CINCH H 2PF WHRD B	2321 223878615649 CER2 0603 X7R 16V 1N PM10 R	2437 202002191725 ELCAP SM RVS 16V 10U PM20
1633 243803100429 SOC PHONE H 1PF 3.5 ST B	2322 223878615649 CER2 0603 X7R 16V 1N PM10 R	2438 202002191725 ELCAP SM RVS 16V 10U PM20
1635 313818872291 CON BM V 26PF 2.0		

Go to cover page

## Spare Parts List

2451	223878615649	CER2 0603 X7R 16V 1N PM10 R	2923	203803513202	ELCAP RGA 16V S 10U PM20 A	3071	319802132230	RST SM 0603	22K PM5 COL
2452	202002191725	ELCAP SM RVS 16V 10U PM20	2931	222236525224	CAP MPOL 1VS 220N PM10 A	3072	319802134730	RST SM 0603	47K PM5 COL
2453	222224119876	CER2 1206 Y5V 10V 10U P8020R	2932	223886715101	CER1 0603 NP050V 1P PM5 R	3073	319802131030	RST SM 0603	10K PM5 COL
2456	202002191725	ELCAP SM RVS 16V 10U PM20	2933	222236525224	CAP MPOL 1VS 220N PM10 A	3075	319802133330	RST SM 0603	33K PM5 COL
2457	223878615649	CER2 0603 X7R 16V 1N PM10 R	2935	223886715101	CER1 0603 NP050V 1P PM5 R	3201	319802134720	RST SM 0603	4K7 PM5 COL
2458	223878615649	CER2 0603 X7R 16V 1N PM10 R	2936	203803513201	ELCAP RGA 16V S 1U PM20A	3202	319802134720	RST SM 0603	4K7 PM5 COL
2459	223878615649	CER2 0603 X7R 16V 1N PM10 R	2937	223878615649	CER2 0603 X7R16V 1N PM10 R	3203	319802190030	RST SM 0603 JUMP.	0R05 COL
2461	223878615649	CER2 0603 X7R 16V 1N PM10 R	2938	203803350019	ELCAP VZ 16VS 10U PM20 A	3206	319802131030	RST SM 0603	10K PM5 COL
2462	223878615649	CER2 0603 X7R 16V 1N PM10 R	2941	203803527205	ELCAP KM 16VS 470U PM20 A	3211	235003510472	RST NETW SMARV24 4X 4K7PM5	
2463	223878615649	CER2 0603 X7R 16V 1N PM10 R	2942	203803527205	ELCAP KM 16VS 470U PM20 A	3212	235003510472	RST NETW SMARV24 4X 4K7PM5	
2465	223878615649	CER2 0603 X7R 16V 1N PM10 R	2945	223858615623	CER2 0603 X7R50V 1N PM10 R	3213	319802135610	RST SM 0603	560R PM5 COL
2466	223878615649	CER2 0603 X7R 16V 1N PM10 R	2947	203803500038	ELCAP SM 16VS 1U PM20 A	3215	319802135610	RST SM 0603	560R PM5 COL
2466	223878615649	CER2 0603 X7R 16V 1N PM10 R	2951	203803513202	ELCAP RGA 16V S 10U PM20 A	3216	319802135610	RST SM 0603	560R PM5 COL
2466	223878615649	CER2 0603 X7R 16V 1N PM10 R	2953	223858615623	CER2 0603 X7R50V 1N PM10 R	3217	319802135610	RST SM 0603	560R PM5 COL
2467	223878615649	CER2 0603 X7R 16V 1N PM10 R	2955	223858615627	CER2 0603 X7R50V 2N2 PM10R	3218	319802135610	RST SM 0603	560R PM5 COL
2468	223878615649	CER2 0603 X7R 16V 1N PM10 R	2956	223886715221	CER1 0603 NP050V 220P PM5 R	3219	319802135610	RST SM 0603	560R PM5 COL
2469	223878615649	CER2 0603 X7R 16V 1N PM10 R	2957	203803500037	ELCAP SM 16VS 47U PM20 A	3220	319802135610	RST SM 0603	560R PM5 COL
2471	223878615649	CER2 0603 X7R 16V 1N PM10 R	2958	223878615649	CER2 0603 X7R16V 1N PM10 R	3301	319802137590	RST SM 0603	75R PM5 COL
2472	223878615649	CER2 0603 X7R 16V 1N PM10 R	2961	203803500038	ELCAP SM 16VS 1U PM20 A	3302	319802190030	RST SM 0603 JUMP.	0R05 COL
2473	223878615649	CER2 0603 X7R 16V 1N PM10 R	2962	223886715221	CER1 0603 NP050V 220P PM5 R	3303	212211806104	RST SM 0603 RC0603	137R PM1
2475	223878615649	CER2 0603 X7R 16V 1N PM10 R	2963	223878615649	CER2 0603 X7R16V 1N PM10 R	3304	319802131010	RST SM 0603	1R PM5 COL
2476	223878615649	CER2 0603 X7R 16V 1N PM10 R	2964	223878615649	CER2 0603 X7R16V 1N PM10 R	3305	319802137590	RST SM 0603	75R PM5 COL
2477	223878615649	CER2 0603 X7R 16V 1N PM10 R	2965	203801700339	ELCAP SM 16VS 10U P50M10 R	3306	319802190030	RST SM 0603	0R05 COL
2478	223878615649	CER2 0603 X7R 16V 1N PM10 R	2968	223891615641	CER2 0603 X7R25V 22N PM10R	3307	212211806104	RST SM 0603 RC0603	137R PM1
2479	223878615649	CER2 0603 X7R 16V 1N PM10 R	2969	223891615641	CER2 0603 X7R25V 22N PM10R	3308	319802137590	RST SM 0603	75R PM5 COL
2481	223878615649	CER2 0603 X7R 16V 1N PM10 R	2970	203801750406	ELCAP SM 16VS 4U7 PM20 B	3309	319802190030	RST SM 0603 JUMP.	0R05 COL
2482	223878615649	CER2 0603 X7R 16V 1N PM10 R	2971	223891611549	CER1 0603 NP025V 1N PM5 R	3310	319802131030	RST SM 0603	10K PM5 COL
2483	223878615649	CER2 0603 X7R 16V 1N PM10 R	2972	223886715221	CER1 0603 NP050V 220P PM5 R	3311	212211806104	RST SM 0603 RC0603	137R PM1
2485	223878615649	CER2 0603 X7R 16V 1N PM10 R	2972	223891611549	CER1 0603 NP025V 1N PM5 R	3312	319802131510	RST SM 0603	150R PM5 COL
2486	223878615649	CER2 0603 X7R 16V 1N PM10 R	2973	203803500037	ELCAP SM 16VS 47U PM20 A	3313	319802131510	RST SM 0603	150R PM5 COL
2487	223878615649	CER2 0603 X7R 16V 1N PM10 R	2973	223858615632	CER2 0603 X7R50V 4N7 PM10R	3315	319802131010	RST SM 0603	1R PM5 COL
2488	223878615649	CER2 0603 X7R 16V 1N PM10 R	2974	223878615649	CER2 0603 X7R16V 1N PM10 R	3316	319802131030	RST SM 0603	10K PM5 COL
2489	223878615649	CER2 0603 X7R 16V 1N PM10 R	2974	223858615632	CER2 0603 X7R50V 4N7 PM10R	3317	319802132220	RST SM 0603	2K2 PM5 COL
2491	223878615649	CER2 0603 X7R 16V 1N PM10 R	2975	203803500038	ELCAP SM 16VS 1U PM20 A	3318	319802132210	RST SM 0603	220R PM5 COL
2492	223878615649	CER2 0603 X7R 16V 1N PM10 R	2976	203801700339	ELCAP SM 16VS 10U P50M10 R	3319	319802132220	RST SM 0603	2K2 PM5 COL
2502	222224119876	CER2 1206 Y5V 10V 10U P8020R	2977	223886715221	CER1 0603 NP050V 220P PM5 R	3320	319802131010	RST SM 0603	220R PM5 COL
2503	222224119876	CER2 1206 Y5V 10V 10U P8020R	2980	223858615627	CER2 0603 X7R50V 2N2 PM10R	3321	319802132210	RST SM 0603	220R PM5 COL
2505	222224119876	CER2 1206 Y5V 10V 10U P8020R	2982	223891615641	CER2 0603 X7R25V 22N PM10R	3322	319802190030	RST SM 0603 JUMP.	0R05 COL
2506	22291028854	CER2 0805 Y5V 25V 220N P8020	2983	223891615641	CER2 0603 X7R25V 22N PM10R	3323	319802134720	RST SM 0603	4K7 PM5 COL
2507	22291028854	CER2 0805 Y5V 25V 220N P8020	2984	223878615649	CER2 0603 X7R16V 1N PM10 R	3323	319802134720	RST SM 0603	4K7 PM5 COL
2508	22291028854	CER2 0805 Y5V 25V 220N P8020	2985	223878615649	CER2 0603 X7R16V 1N PM10 R	3327	319802131030	RST SM 0603	10K PM5 COL
2511	22291028854	CER2 0805 Y5V 25V 220N P8020	2987	203801750406	ELCAP SM 16VS 4U7 PM20 B	3328	319802131030	RST SM 0603	10K PM5 COL
2512	22291028854	CER2 0805 Y5V 25V 220N P8020	2991	2022020006658	ELCAP SS 16VS 10U PM20 A	3329	319802131030	RST SM 0603	10K PM5 COL
2513	22291028854	CER2 0805 Y5V 25V 220N P8020	2991	203803500038	ELCAP SM 16VS 1U PM20 A	3330	319802131030	RST SM 0603	10K PM5 COL
2601	223886715331	CER1 0603 NP0 50V 330P PM5 R	3009	319802134720	RST SM 0603	4K7 PM5 COL			
2602	223886715331	CER1 0603 NP0 50V 330P PM5 R	3010	319802134730	RST SM 0603	47K PM5 COL			
2603	223886715331	CER1 0603 NP0 50V 330P PM5 R	3011	319802131030	RST SM 0603	10K PM5 COL			
2611	223886715229	CER1 0603 NP0 50V 22P PM5 R	3012	319802131030	RST SM 0603	10K PM5 COL			
2612	223886715229	CER1 0603 NP0 50V 22P PM5 R	3013	319802134730	RST SM 0603	47K PM5 COL			
2613	202001293721	ELCAP SM RV2 16V 10U PM20	3015	319802132230	RST SM 0603	22K PM5 COL			
2615	223886715229	CER1 0603 NP0 50V 22P PM5 R	3017	319802134730	RST SM 0603	47K PM5 COL			
2616	223886715331	CER1 0603 NP0 50V 330P PM5 R	3018	319802190030	RST SM 0603 JUMP.	0R05 COL			
2617	223886715331	CER1 0603 NP0 50V 330P PM5 R	3019	319802132230	RST SM 0603	22K PM5 COL			
2631	223886715101	CER1 0603 NP0 50V 1P PM5 R	3020	319802132210	RST SM 0603	220R PM5 COL			
2632	223886715229	CER1 0603 NP0 50V 22P PM5 R	3021	319802134710	RST SM 0603	470R PM5 COL			
2633	223886715101	CER1 0603 NP0 50V 1P PM5 R	3022	319802132230	RST SM 0603	22K PM5 COL			
2634	223886715331	CER1 0603 NP0 50V 330P PM5 R	3023	212010592155	RTS MOX 2W RSS S 1R PM5 B	3351	235003510101	RST NETW SMARV24 4X1R PM5	
2635	223886715229	CER1 0603 NP0 50V 22P PM5 R	3024	319802131220	RST SM 0603	1K2 PM5 COL			
2636	223886715331	CER1 0603 NP0 50V 330P PM5 R	3025	319802154710	RST SM 0805	470R PM5 COL			
2637	223886715331	CER1 0603 NP0 50V 330P PM5 R	3026	319802154710	RST SM 0805	470R PM5 COL			
2638	223886715331	CER1 0603 NP0 50V 330P PM5 R	3027	319802134720	RST SM 0603	4K7 PM5 COL			
2639	223886715331	CER1 0603 NP0 50V 330P PM5 R	3028	319802132240	RST SM 0603	220K PM5 COL			
2641	223886715331	CER1 0603 NP0 50V 330P PM5 R	3029	319802132240	RST SM 0603	220K PM5 COL			
2642	223886715331	CER1 0603 NP0 50V 330P PM5 R	3030	319802131540	RST SM 0603	150K PM5 COL			
2643	223886715331	CER1 0603 NP0 50V 330P PM5 R	3032	319802132230	RST SM 0603	22K PM5 COL			
2681	319801631010	CER1 0603 NP0 50V 1P COL	3033	319802131030	RST SM 0603	10K PM5 COL			
2682	319801631010	CER1 0603 NP0 50V 1P COL	3035	319802132230	RST SM 0603	22K PM5 COL			
2683	319801731040	CER2 0603 X7R 16V 1N COL	3036	319802134730	RST SM 0603	47K PM5 COLR			
2686	222224119876	CER2 1206 Y5V 10V 10U P8020R	3037	319802131030	RST SM 0603	10K PM5 COL			
2687	319801741050	CER2 0603 Y5V 10V 1U COL	3038	319802131030	RST SM 0603	10K PM5 COL			
2688	319801741050	CER2 0603 Y5V 10V 1U COL	3040	212010592383	RST MOX 2W RSS S 2R2 PM5	3389	235003510101	RST NETW SMARV24 4X1R PM5	
2689	319801731030	CER2 0603 X7R 50V 10N COL	3042	319802132230	RST SM 0603	22K PM5 COL			
2690	319801731030	CER2 0603 X7R 50V 10N COL	3043	319802134720	RST SM 0603	22K PM5 COL			
2691	319801731030	CER2 0603 X7R 50V 10N COL	3044	319802151010	RST SM 0805	1R PM5 COLR			
2692	319801731030	CER2 0603 X7R 50V 10N COL	3045	319802133320	RST SM 0603	3K3 PM5 COL			
2693	319801731030	CER2 0603 X7R 50V 10N COL	3046	319802151590	RST SM 0805	15R PM5 COLR			
2694	319801731030	CER2 0603 X7R 50V 10N COL	3048	319802132230	RST SM 0603	22K PM5 COL			
2695	20220090070073	TANCAP SM293D 6V3 330UPM20	3049	319802134730	RST SM 0603	47K PM5 COL			
2696	319801734720	CER2 0603 X7R 50V 4N7 COL	3050	319802134730	RST SM 0603	47K PM5 COL			
2697	319801731030	CER2 0603 X7R 50V 10N COL	3060	319802131030	RST SM 0603	10K PM5 COL			
2698	319801731030	CER2 0603 X7R 50V 10N COL	3061	319802134740</td					

## Spare Parts List

180MT10P LMT

59

 Go to cover page

3638	319802131020	RST SM 0603	1K PM5 COL	3696	319802135610	RST SM 0603	560R PM5 COL	5342	313816874261	TI321611G8-SMD
3639	319802132730	RST SM 0603	27K PM5 COL	3697	319802131020	RST SM 0603	1K PM5 COL	5343	313816874261	TI321611G8-SMD
3641	319802131020	RST SM 0603	1K PM5 COL	3698	319802136810	RST SM 0603	680R PM5 COL	5361	313816874261	TI321611G8-SMD
3427	319802131010	RST SM 0603	1R PM5 COL	3901	319802138220	RST SM 0603	8K2 PM5 COL	5362	313816874261	TI321611G8-SMD
3428	319802190030	RST SM 0603	JUMP. 0R05 COL	3902	319802131030	RST SM 0603	10K PM5 COL	5363	313816874261	TI321611G8-SMD
3429	319802133320	RST SM 0603	3K3 PM5 COL	3904	319802133320	RST SM 0603	3K3 PM5 COL	5373	313816874261	TI321611G8-SMD
3430	319802131010	RST SM 0603	1R PM5 COL	3905	319802132230	RST SM 0603	22K PM5 COL	5421	313816874261	TI321611G8-SMD
3431	319802132290	RST SM 0603	22R PM5 COL	3907	319802132230	RST SM 0603	22K PM5 COL	5422	313816874261	TI321611G8-SMD
3432	319802132290	RST SM 0603	22R PM5 COL	3909	319802190030	RST SM 0603	JUMP. 0R05 COL	5423	313816874261	TI321611G8-SMD
3433	319802134720	RST SM 0603	4K7 PM5 COL	3911	319802133320	RST SM 0603	3K3 PM5 COL	5426	313816874261	TI321611G8-SMD
3436	319802190030	RST SM 0603	JUMP. 0R05 COL	3912	319802138220	RST SM 0603	8K2 PM5 COL	5451	313816874261	TI321611G8-SMD
3437	319802132230	RST SM 0603	22K PM5 COL	3913	319802131030	RST SM 0603	10K PM5 COL	5456	313816874261	TI321611G8-SMD
3438	319802135620	RST SM 0603	5K6 PM5 COL	3915	319802133320	RST SM 0603	3K3 PM5 COL	5457	313816874261	TI321611G8-SMD
3439	319802131030	RST SM 0603	10K PM5 COL	3921	319802131020	RST SM 0603	1K PM5 COL	5501	242254942103	IND FXD 0805 EM1MHZ 2K2 R
3440	319802134790	RST SM 0603	47R PM5 COL	3922	319802131020	RST SM 0603	1K PM5 COL	5502	242254942103	IND FXD 0805 EM1MHZ 2K2 R
3441	319802134720	RST SM 0603	4K7 PM5 COL	3923	319802131030	RST SM 0603	10K PM5 COL	5503	242254942103	IND FXD 0805 EM1MHZ 2K2 R
3442	319802134720	RST SM 0603	4K7 PM5 COL	3926	319802132230	RST SM 0603	22K PM5 COL	5505	242254942103	IND FXD 0805 EM1MHZ 2K2 R
3445	232704624202	RST SM 0603	RC22H 2K4 PM1 R	3927	319802138220	RST SM 0603	8K2 PM5 COL	5506	242254942103	IND FXD 0805 EM1MHZ 2K2 R
3446	319802131030	RST SM 0603	10K PM5 COL	3928	319802131030	RST SM 0603	10K PM5 COL	5507	242254942103	IND FXD 0805 EM1MHZ 2K2 R
3447	319802131830	RST SM 0603	18K PM5 COL	3929	319802131030	RST SM 0603	10K PM5 COL	5611	242253595853	IND FXD SM 0603 0U10 PM10 R
3448	319802132730	RST SM 0603	27K PM5 COL	3931	319802132230	RST SM 0603	22K PM5 COL	5612	242253595853	IND FXD SM 0603 0U10 PM10 R
3449	319802134720	RST SM 0603	4K7 PM5 COL	3932	319802138220	RST SM 0603	8K2 PM5 COL	5613	242253595853	IND FXD SM 0603 0U10 PM10 R
3450	21221105947	RST SM 0603	RC0603 240K PM5	3934	213810500064	RST MOX 1W RSS S 0R43 PM5		5615	242253595853	IND FXD SM 0603 0U10 PM10 R
3453	319802134790	RST SM 0603	47R PM5 COL	3935	319802132720	RST SM 0603	2K7 PM5 COL	5616	242253595853	IND FXD SM 0603 0U10 PM10 R
3454	319802190030	RST SM 0603	JUMP. 0R05 COL	3936	319802132230	RST SM 0603	22K PM5 COL	5631	242253595853	IND FXD SM 0603 0U10 PM10 R
3455	319802131020	RST SM 0603	1K PM5 COL	3937	319802133320	RST SM 0603	3K3 PM5 COL	5632	242253595853	IND FXD SM 0603 0U10 PM10 R
3456	319802135610	RST SM 0603	560R PM5 COL	3938	319802132230	RST SM 0603	22K PM5 COL	5681	313816874261	TI321611G8-SMD
3457	319802134720	RST SM 0603	4K7 PM5 COL	3939	319802132230	RST SM 0603	39K PM5 COL	5901	242253594329	IND FXD SPT0203A 22U PM5A
3458	235003510479	RST NETW	SMARV24 4X 47RPM5	3941	319802134730	RST SM 0603	47K PM5 COL	5902	242253600036	IND FXD TSL0808S 1U PM10 A
3459	235003510479	RST NETW	SMARV24 4X 47RPM5	3942	319802134730	RST SM 0603	47K PM5 COL	5905	242253594329	IND FXD SPT0203A 22U PM5A
3461	235003510479	RST NETW	SMARV24 4X 47RPM5	3943	319802132230	RST SM 0603	22K PM5 COL			
3462	235003510479	RST NETW	SMARV24 4X 47RPM5	3951	319802132230	RST SM 0603	22K PM5 COL			
3463	319802132290	RST SM 0603	22R PM5 COL	3952	319802133930	RST SM 0603	39K PM5 COL			
3465	319802132290	RST SM 0603	22R PM5 COL	3954	319802132230	RST SM 0603	22K PM5 COL			
3466	319802132290	RST SM 0603	22R PM5 COL	3955	319802132720	RST SM 0603	2K7 PM5 COL			
3467	319802132290	RST SM 0603	22R PM5 COL	3961	319802131030	RST SM 0603	10K PM5 COL			
3468	319802132290	RST SM 0603	22R PM5 COL	3962	319802131530	RST SM 0603	15K PM5 COL			
3469	319802134720	RST SM 0603	4K7 PM5 COL	3963	319802131530	RST SM 0603	15K PM5 COL			
3471	319802132320	RST SM 0603	22R PM5 COL	3964	319802132720	RST SM 0603	2K7 PM5 COL			
3472	319802132230	RST SM 0603	22K PM5 COL	3965	319802131530	RST SM 0603	15K PM5 COL			
3473	319802134720	RST SM 0603	4K7 PM5 COL	3966	319802131030	RST SM 0603	10K PM5 COL			
3475	319802134720	RST SM 0603	4K7 PM5 COL	3967	319802131530	RST SM 0603	15K PM5 COL			
3476	319802135610	RST SM 0603	560R PM5 COL	3968	319802134720	RST SM 0603	4K7 PM5 COL			
3477	319802134710	RST SM 0603	47R PM5 COL	3971	319802131030	RST SM 0603	10K PM5 COL			
3481	319802134720	RST SM 0603	4K7 PM5 COL	3972	319802131530	RST SM 0603	15K PM5 COL			
3482	319802134720	RST SM 0603	4K7 PM5 COL	3973	319802131530	RST SM 0603	15K PM5 COL			
3502	319802151090	RST SM 0805	10R PM5 COLR	3974	319802132720	RST SM 0603	2K7 PM5 COL			
3503	319802151090	RST SM 0805	10R PM5 COLR	3975	319802131530	RST SM 0603	15K PM5 COL			
3506	319802190020	RST SM 0805	JUMP. 0R05 COL R	3976	319802131030	RST SM 0603	10K PM5 COL			
3508	319802131030	RST SM 0603	10K PM5 COL	3977	319802131530	RST SM 0603	15K PM5 COL			
3511	319802131030	RST SM 0603	10K PM5 COL	3978	319802131040	RST SM 0603	1K PM5 COL			
3517	319802190030	RST SM 0603	JUMP. 0R05 COL	3979	319802134720	RST SM 0603	4K7 PM5 COL			
3518	319802190030	RST SM 0603	JUMP. 0R05 COL	3981	319802132220	RST SM 0603	2K2 PM5 COL			
3522	319802190030	RST SM 0603	JUMP. 0R05 COL	3982	319802131030	RST SM 0603	10K PM5 COL			
3523	319802190030	RST SM 0603	JUMP. 0R05 COL	3983	319802134730	RST SM 0603	47K PM5 COL			
3601	319802131510	RST SM 0603	150R PM5 COL	3984	319802132230	RST SM 0603	22K PM5 COL			
3602	319802132240	RST SM 0603	220K PM5 COL	3989	213810113472	RST CRB CFR-12 A 4K7 PM5 A				
3603	319802131020	RST SM 0603	1K PM5 COL	3990	213810113473	RST CRB CFR-12 A 47K PM5 A				
3605	319802132730	RST SM 0603	27K PM5 COL	3991	232220733478	RST FUSE NFR25H A 4R7 PM5				
3606	319802131510	RST SM 0603	150R PM5 COL	3992	213810113472	RST CRB CFR-12 A 4K7 PM5 A				
3607	319802132240	RST SM 0603	220K PM5 COL	3993	213810113331	RST CRB CFR-12 A 330R PM5 A				
3608	319802131020	RST SM 0603	1K PM5 COL	3994	213810113473	RST CRB CFR-12 A 47K PM5 A				
3609	319802132730	RST SM 0603	27K PM5 COL	3995	213810113472	RST CRB CFR-12 A 4K7 PM5 A				
3611	319802137590	RST SM 0603	75R PM5 COL	3996	213810113391	RST CRB CFR-12 A 390R PM5 A				
3612	319802131010	RST SM 0603	1R PM5 COL	3997	213810113561	RST CRB CFR-12 A 560R PM5 A				
3613	319802132730	RST SM 0603	27K PM5 COL	3998	213810113331	RST CRB CFR-12 A 330R PM5 A				
3615	319802136880	RST SM 0603	6K8 PM5 COL	3999	213810113331	RST CRB CFR-12 A 330R PM5 A				
3617	319802132730	RST SM 0603	1R PM5 COL							
3618	319802137590	RST SM 0603	75R PM5 COL							
3619	319802131010	RST SM 0603	1R PM5 COL							
3621	319802137590	RST SM 0603	75R PM5 COL							
3622	319802131010	RST SM 0603	1R PM5 COL							
3623	319802136890	RST SM 0603	68R PM5 COL							
3625	319802131020	RST SM 0603	1K PM5 COL							
3626	319802131090	RST SM 0603	10R PM5 COL							
3627	319802137590	RST SM 0603	75R PM5 COL							
3628	319802131090	RST SM 0603	10R PM5 COL							
3631	319802137590	RST SM 0603	75R PM5 COL							
3632	319802131010	RST SM 0603	1R PM5 COL							
3633	319802137590	RST SM 0603	75R PM5 COL							
3633	319802131010	RST SM 0603	1R PM5 COL							
3633	319802131010	RST SM 0603	1R PM5 COL							
3636	319802131020	RST SM 0603	1K PM5 COL							
3636	319802131020	RST SM 0603	1K PM5 COL							
3637	319802132730	RST SM 0603	27K PM5 COL							
3642	319802132730	RST SM 0603	27K PM5 COL							
3643	319802131020	RST SM 0603	1K PM5 COL							
3645	319802132730	RST SM 0603	27K PM5 COL							
3681	319802131030	RST SM 0603	10K PM5 COL							
3682	319802131530	RST SM 0603	15K PM5 COL							
3683	319802132220	RST SM 0603	2K2 PM5 COL							
3684	319802132220	RST SM 0603	2K2 PM5 COL							
3686	319802190030	RST SM 0603	JUMP. 0R05 COL							
3687	319802134790	RST SM 0603	47R PM5 COL							
3688	319802134790	RST SM 0603	47R PM5 COL							
3689	319802134720	RST SM 0603	4K7 PM5 COL							
3690	319802131020	RST SM 0603	1K PM5 COL							
3692	319802131030	RST SM 0603	10K PM5 COL							
3694	319802136880	RST SM 0603	6K8 PM5 COL							
3694	319802136880	RST SM 0603	6K8 PM5 COL							
3695	319802136880	RST SM 0603	680R PM5 COL							
3696	319802136880	RST SM 0603	680R PM5 COL							
3697	319802136880	RST SM 0603	680R PM5 COL							
3698	319802136880	RST SM 0603	680R PM5 COL							
3699	319802136880	RST SM 0603	680R PM5 COL							
3700	313816877221	DRUM CHOKE	68UH/3A							
3625	319802131020	RST SM 0603	1K PM5 COL							
3626	319802131090	RST SM 0603	10R PM5 COL							
3627	319802137590	RST SM 0603	75R PM5 COL							
3628	319802131090	RST SM 0603	10R PM5 COL							
3631	319802137590	RST SM 0603	75R PM5 COL	</td						

## Spare Parts List

[Go to cover page](#)

-	
7038	933967310685 TRA SIG SMBC848C (ONSE) R
7039	933967310685 TRA SIG SMBC848C (ONSE) R
7041	933967310685 TRA SIG SMBC848C (ONSE) R
7042	933967310685 TRA SIG SMBC848C (ONSE) R
7051	932216888668 IC SM LM317D2T (ST) R
7052	932216732668 IC SM LD1117S25 (ST) R
7201	935256600112 IC SM P80C51RA+4A (PHSE) L
7202	932212662682 IC M24C16-BN6 (ST) L
7203	932217680682 IC M29F010B-90P1 (ST) L
7205	935218650118 IC SM 74LVC373APW (PHSE) R
7206	932216554668 IC SM 74LCX139T (ST) R
7301	932214526668 IC SM M24C02-WMN6 (ST) R
7321	935260739118 IC SM 74LVC14APW (PHSE) R
7322	932217743685 IC SM LM810M3-4.0 (NSC0) R
7323	933714830653 IC SM 74HC4052D (PHSE) R
7331	932217970671 IC SM JAGASM (SAGE) Y
7351	933967310685 TRA SIG SMBC848C (ONSE) R
7361	932216677682 IC SM M12L16161A-7T (ESMT) L
7362	932216677682 IC SM M12L16161A-7T (ESMT) L
7363	932216677682 IC SM M12L16161A-7T (ESMT) L
7401	935267395518 IC SM SAAT118E/V1 (PHSE) R
7402	933967310685 TRA SIG SMBC848C (ONSE) R
7403	933967310685 TRA SIG SMBC848C (ONSE) R
7405	933967310685 TRA SIG SMBC848C (ONSE) R
7406	933967310685 TRA SIG SMBC848C (ONSE) R
7407	933967310685 TRA SIG SMBC848C (ONSE) R
7408	933967310685 TRA SIG SMBC848C (ONSE) R
7409	933967310685 TRA SIG SMBC848C (ONSE) R
7410	935209280118 IC SM 74LVT86D (PHSE) R
7411	319801043360 TRA SIG SMPMBT2369 (COL) R
7412	319801043360 TRA SIG SMPMBT2369 (COL) R
7413	319801043360 TRA SIG SMPMBT2369 (COL) R
7415	319801043360 TRA SIG SMPMBT2369 (COL) R
7431	932216733668 IC SM LD1117S33 (ST) R
7451	932216918671 IC SM FLI22 (SAGE) Y
7471	932217603668 IC SM K4S643232E-TC50(SMGK)
7503	932217686668 IC SM THC63LVDM83A (THIN) R
7505	932217686668 IC SM THC63LVDM83A (THIN) R
7621	933967310685 TRA SIG SMBC848C (ONSE) R
7901	935172510112 IC TDA1308/N1 (PHSE) L
7903	823827712241 IC PT2399 L
7904	823827712241 IC PT2399 L
7905	933510720686 IC MC78L05ACP (MOTA) R
7906	933221960126 TRA SIG BC638 (PHSE) A
7907	932209011673 TRA SIG BC548C (KECO) A
7911	932209011673 TRA SIG BC548C (KECO) A
7912	932210142676 TRA SIG BC558C (KECO) A
7913	932209011673 TRA SIG BC548C (KECO) A
7914	932210142676 TRA SIG BC558C (KECO) A
7921	933237790126 TRA SIG BC547C (PHSE) A
7922	932209011673 TRA SIG BC548C (KECO) A
7923	932209011673 TRA SIG BC548C (KECO) A
7924	932209011673 TRA SIG BC548C (KECO) A
7931	935261847112 IC TDA1517/N3 (PHSE) L
7991	933553530676 TRA SIG TBC548C (TOSJ) A
7992	933553530676 TRA SIG TBC548C (TOSJ) A
7996	933510720686 IC MC78L05ACP (MOTA) R
7997	933553530676 TRA SIG TBC548C (TOSJ) A

 Go to cover page

All rights strictly reserved. Reproduction or issue to third parties in any form, without written permission, is prohibited.

## GENERAL PRODUCT SPECIFICATION

- . 18.1" LCD monitor with TV function.
- . PC 15pins D-SUB analog interface.
- . TV Tuner, S-Video with L/R RCA Audio in.  
SCART (RGB, AV) input interface (for Europe model)  
Cinch input (YUV, AV) input interface (for NAFTA, AP model)
- . PC audio line in, and headphone out interface
- . L/R audio line output.
- . NTSC, PAL, SECAM TV system.
- . 100 Pages Teletext (Europe) and Closed caption, V-chip(NAFTA)
- . Video on PC graphic picture in picture feature
- . PC graphic auto picture adjustment
- . 17 user modes
- . User friendly OSD menu
- . User friendly remote controller
- . DDC2B communication capability
- . MAX. resolution 1280 x 1024 non-interlace at 75Hz
- . SXGA 18.1 color TFTLCD flat panel
- . Easy tilt and swivel base
- . Full range power supply adapter 90~264 VAC
- . CE environmental policy
- . Anti-glare to reduce light reflection
- . Power management capability
- . TCO 95
- . VESA standard wall mount kit (option)

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV					
	TYPE : 180MT10P/00C					
BRAND : PHILIPS			8639 000 12344			
2002-05-06						
NAME	Robert Lin	SUPERS	36	590	- 1	10
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

JRM 100 154A4

 Go to cover page

## CONTENTS

- 1.0 Foreword
- 2.0 Product profile
- 2.1 LCD
- 2.2 Scanning frequencies
- 2.3 Video dot rate
- 2.4 Power input
- 2.5 Power consumption
- 2.6 Dimensions
- 2.7 Weight
- 2.8 Functions
- 2.9 Ambient temperature
- 2.10 Regulatory compliance
- 3.0 Electrical characteristics
- 3.1 Interface signals/cables
- 3.2 User interface
  - 3.2.1 Front control panel
  - 3.2.2 Front control panel definition
  - 3.2.3 PC signal control via front key
  - 3.2.4 TV signal control via front key and RC control
    - 3.2.4.1 Remote control function
    - 3.2.4.2 Remote control key definition
    - 3.2.4.3 TV OSD control function
    - 3.2.5 PC signal timing requirement and TV system requirement
    - 3.2.6 PC Interface
    - 3.2.6.1 Mode storing capacity
    - 3.2.6.2 Available timings
    - 3.2.6.3 Horizontal scanning
    - 3.2.6.4 Vertical scanning
    - 3.3.2 TV interface
- 3.4 Power input connection
- 3.5 Power management
- 3.6 Display identification
- 4.0 Visual characteristics
- 4.1 Test conditions
- 4.2 Resolution
- 4.3 Brightness

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV					
	TYPE : 180MT10P/00C					
BRAND : PHILIPS			8639 000 12344			
2002-05-06						
NAME	Robert Lin	SUPERS	36	590	- 2	10
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

JRM 100 154A4

 Go to cover page

- 4.4 Image size
- 4.4.1 Actual display size
- 4.5 Brightness uniformity
- 4.6 PC white coloradjustment
- 4.7 TV white coloradjustment
- 4.8 TV picture centering
  
- 5.0 Mechanical characteristics
- 5.1 Controls
- 5.2 Unit dimension /weight
- 5.3 Tilt and swivel base
- 5.4 Transportation packages
- 5.4.1 Shipping dimension /weight
- 5.4.2 Block unit / palletization
  
- 6.0 Environmental characteristics
- 6.1 Susceptibility of display to external environment
- 6.2 Transportation tests
- 6.3 Display disturbances from external environment
  
- 7.0 Reliability
- 7.1 Mean time between failures
- 8.0 Quality assurance requirements
- 8.1 Acceptance test
- 9.0 Serviceability

All rights strictly reserved. Reproduction or issue to third parties in any form whatever is not permitted without written authority from the proprietor.

CLASS NO:	18.1" TFT SXGA LCD Monitor/TV					
	TYPE : 180MT10P/00C					
	BRAND : PHILIPS					
2002-05-06				8639 000 12344		
NAME: Robert Lin	SUPER:	36	590 — 3	10	A4	
TY	CHECK	DATE: 2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

LJPN-1921-15A24

 Go to cover page

- 1.0 FOREWORD  
This specification describes a 18.1" SXGA multi-scan color Super-TFT LCD Monitor/TV with max. resolution upto 1280X1024/75Hz non-interlaced.
- 2.0 PRODUCT PROFILE  
Philips 18.1" TFTLCD monitor/TV can connect to PC with analog D-SUB, and has TV, Video interface with integrated base.  
Meet world wide five major TV system:  
West Europe, East Europe, NAFTA, Asia Pacific and China.

**2.1 LCD**  
 Type NR. : TX46D14VC0HAB  
 Dimensions : 18.1  
 Pitch ( mm ) : 0.2805mm  
 Color pixel arrangement: RGB vertical stripes  
 Display surface : Antiglare  
 Number of color : 16.7M ( 8 bits / color )  
 Backlight : 8 CCFL  
 Active area(WxH) : 359.0 mmx 287.2 mm  
 Viewing angle : CRz=10  
 Typical : Vertical : 170 , Horizontal: 170

Contrast ratio : Typical 300.  
 Luminance of white : Typical 300 Nits.

**2.2 Scanning frequencies**  
 Hor.: 30 - 80KHz Ver. : 56 - 75 Hz  
**2.3 Video dotrate** : <135 MHz  
**2.4 Power input** : 90 - 264 Vac, 50/60 2 Hz  
**2.5 Power consumption** : Adapter 12 +/- 1V 6.0A output  
**2.6 Dimensions** : typ 68 W  
**2.7 Weight** : 452 mm W X 452 mm H X 200 mm D  
**2.8 Functions :**  
 15 pins D-sub analog interface.  
 Tuner, S-video ( video and RCA audio jack ), SCART ( Europe model ), Cinch ( NAFTA, AP model ), PC audio linein input, Headphone output interface And line out.

**2.9 Ambient temperature :** 0 - 35°C  
**2.10 Regulatory compliance :**  
 FCC, EPA, UL, CSA, TUV/GS, TUV/ERG, CE, C-Tick, SEMKO, TCO95, Nutek, MPRRI, BSMI, PSB, CB, PZ1, ISO13406-2, EN60950/IEC60950, EN55013, EN55020, EN55022, EN55024, EN60555-2, EN61000-3-2

CLASS NO:	18.1TFT SXGA LCD Monitor/TV					
	TYPE : 180MT10P/00C					
	BRAND : PHILIPS					
2002-05-06				8639 000 12344		
NAME: Robert Lin	SUPER:	36	590 — 4	10	A4	
TY	CHECK	DATE: 2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

LJPN-1921-15A24

[Go to cover page](#)

## 3.0 Electrical characteristics

## 3.1 Interface signals cables

VGA Interface Cable (for all model)  
Length : 1.8M +/- 50 mm

Stereo RCA audio cable (option)  
Length : 1.5M +/- 50 mm

S-video cable (option)  
Length : 1.5M +/- 50 mm

SCART cable (option)  
Length : 1.5M +/- 50 mm

YCbCr cable (option)  
Length : 1.5M +/- 50 mm

AV cable (option)  
Length : 1.5M +/- 50 mm

Mini Jack stereocable (for all model)  
Length : 1.5M +/- 50 mm

All rights strictly reserved. Reproduction or issue  
to third parties in any form whatever is not permitted.  
without written authority from the proprietor.

CLASS NO:	18.1" TFT SXGA LCD Monitor/ TV					
	TYPE : 180MT10P/00C					
BRAND : PHILIPS			8639 000 12344			
2002-05-06						
NAME: Robert Lin	SUPER:	36	590	—	5	10
TY	CHECK	DATE: 2002-05-06	Properties of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

2006 TDU 15424

[Go to cover page](#)

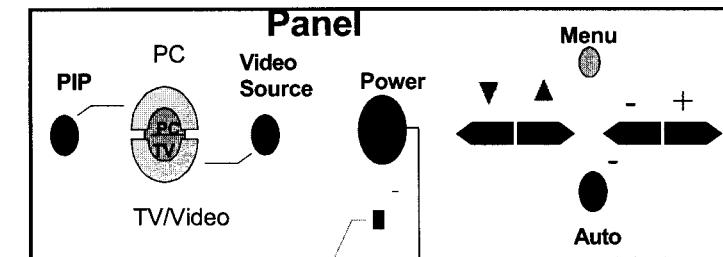
3.1 User interface  
On screen display user control via front keypad (PC and TV OSD) and remote control for TV.

## 3.2.1 Front control panel

PHILIPS

TV

## Front Control



CLASS NO:	18.1" TFT SXGA LCD Monitor/ TV					
	TYPE : 180MT10P/00C					
BRAND : PHILIPS			8639 000 12344			
2002-05-06						
NAME: Robert Lin	SUPER:	36	590	—	6	10
TY	CHECK	DATE: 2002-05-06	Properties of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

2006 TDU 15424

[Go to cover page](#)

## 3.2.2 Front control panel definition :

PIP : PIP enable/disable and size select(active in PC mode).  
 PC/TV : PC/TV select key.  
 PC/TV LED: PC/TV status.  
 Video Source: AV source select key.  
 Power: Power switch.  
 Power LED: Normal operation green. Sleeping mode green with blanking.  
 IR receiver.  
 -CH: Channel up and down, and OSD cursor up and down.  
 -Vol: Volume up and down, and OSD cursor left and right.  
 Auto : Auto adjust PC H,Vsize and position and video phase and clock.  
 Menu: Enable OSD menu(enter key for PC).

All rights strictly reserved. Reproduction or issue  
to third parties in any form whatever is not permitted.  
without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV						
	TYPE : 180MT10P/00C						
BRAND : PHILIPS							
2002-05-06				8639 000 12344			
NAME	Robert Lin	SUPERS	36	590	—	7	10
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4	

JSM-100-05424

[Go to cover page](#)

## 3.2.3 PC Signal control via front keyboard:

Language : ENGLISH , ESPANOL , FRANCAIS , DEUTSCH , ITALIANO  
 Adjust position: H-position, V-position.

Brightness and contrast: Lamps brightness and PC graphic contrast adjustment.

Video noise : Phase adjustment, Clock adjustment

Adjust color : Original panel color , 9300K for CAD/CAM use  
 6500K for image management, User color red, green and blue color adjustable.  
 OSD settings : OSD H,V position settings  
 Product information : Serial number and timing information

Rest to factory setting : Reset brightness, contrast, positions, phase, clock to factory settings.

Picture in picture : Adjust PIP size and position.  
 Select the PIP audio source.

All rights strictly reserved. Reproduction or issue  
to third parties in any form whatever is not permitted.  
without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV						
	TYPE : 180MT10P/00C						
BRAND : PHILIPS							
2002-05-06				8639 000 12344			
NAME	Robert Lin	SUPERS	36	590	—	8	10
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4	

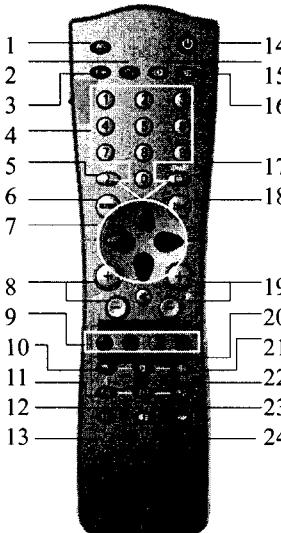
JSM-100-05424

[Go to cover page](#)

## 3.2.4 TV Signal control via front keyboard and RC control:

## 3.2.4.1 Remote control function

1. PIP On/Off/Size
2. PIP Position
3. AV source
4. Digit(0-9)
5. Smart Sound
6. Menu
7. Cursor move
8. Volume + / -
9. Teletext access
10. On/Off Teletext
11. Mix
12. Reveal/Conceal
13. I-II



All rights strictly reserved. Reproduction or issue to third parties in any form whatever is not permitted without written authority from the proprietors.

CLASS NO.	18.1" TFT SXGA LCD Monitor/TV					
	TYPE : 180MT10P/00C					
BRAND : PHILIPS			8639 000 12344			
2002-05-06						
NAME: Robert Lin	SUPER:	36	590	—	9	10
TY	CHECK	DATE: 2002-05-06	Project of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.		A4

JPNM 180L 01424

[Go to cover page](#)

## 3.2.4.2 Remote control key definition

1. PIP On/Off and size  
PIP position  
Press source selectkey to selectEXT, S-Video and TV(AV,CVI, S-Video and TV forNafta)
2. Digital number: Fordirect access to programs .For a 2 digit programnumber, the 2<sup>nd</sup> digit must be entered before the dash disappears.
3. Smart sound: To access a series of settings:VOICE, MUSIC, THEATRE and return to PERSONAL
4. Menu: To display orexit from the menus
5. Cursor: These4 keys are used to movewithin the menus  
Mute : To disable or enable the sound.
6. Volume : Toadjust the sound level
7. Teletext Access: Colouredzones are displayed at the bottom of the screen. The 4 coloured zones give access to the corresponding subjects orpages.(Disable in Nafta)  
The coloured zones flash when the subject or the page is not yet available.
8. On/offteletext: To call up or exit fromteletext. When firstpressed, the mainindex page appears with a list of the items available. Each page has a corresponding 3-figure number. If the selectedchannel does not broadcast teletext, 100will appear andthe screen will remain blank(in this case, exit from teletextand choose anotherchannel). (Disable in NAFTA)
9. Mix: Overlaying texton the TVpicture To activate or deactivate screen overlay.
10. Reveal/Conceal: Use this key toreveal/conceal hidden information(answers to puzzles). (Disable in NAFTA)
11. I-II: Double page teletext  
To activate or deactivate the double page teletext display mode. The active page is displayed on the left and thefollowing page is displayed on the right. Presshold if you want to hold a page (i.e. the contents page). The active page is then displayed on the right. To return to normal mode. Press I-II. Stereo, Mono, Sap soundselect.
12. Standby(power on/off key in US): To set the TV to standby mode. To switch the TV seton again press P -/+ or 0 ..9
13. Timer: Toselect the length of time before the set automatically switches to standby (from 0 to 240 minutes)
14. Program list: To display/clear the list of programs. Use the keys updown select a program and the key right displayit. The symbollocked is displayedalongside all program which are locked, or unlocked symbolmeans if they are not locked.
15. Smart picture: To access a series of settings: RICH, NATURAL, SOFT, MULTIMEDIA and return to PERSONAL.  
(Movies, sports, weaksignal, multimedia andpersonal setting forNafta)
16. PC/TV: PC/TV function selectkey.
17. Channel +/-  
Enlarge: Page enlargement Press this key to display the upper, then lower part of the screen, and then to returnto the normal/page size. (Disable in NAFTA)
18. Hold :Hold a Page. (Disable in NAFTA)
19. OSD/Main index: Screen information To display /remove the program number, the name (if itexists), the time, the sound mode and the time remaining on the timer. Holddown for 5seconds to permanently display the programme number on the

CLASS NO.	18.1" TFT SXGA LCD Monitor/TV					
	TYPE : 180MT10P/00C					
BRAND : PHILIPS			8639 000 12344			
2002-05-06						
NAME: Robert Lin	SUPER:	36	590	—	10	10
TY	CHECK	DATE: 2002-05-06	Project of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.		A4

JPNM 180L 01424

[Go to cover page](#)

screen. The volume level and the smart control adjustments are then displayed each time they are used.  
 23. Alternate channel: To access the previously viewed program  
 24. Close caption: Closed caption selection. (disabled in EE/WE/AP/CN)

## 3.2.4.3 TV OSD control function

**Auto install**

## For Europe:

The first time you switch on the television, use the auto store function in the OSD to start the tuning. The operation takes several minutes. A display shows the search status and the number of programs found. When it has finished the menu disappears. To exit or interrupt the search, press the menu key.

1. If the transmitter or the cable network broadcasts the automatic sort signal, the programs will be correctly numbered.
2. If not, the programs found will be numbered in descending order starting at 99, 98, 97, etc.

Use the SORT menu to renumber them. Some transmitters or cable networks broadcast their own sort parameters (region, language, etc.). Where this is the case, make your choice using the Up down keys and confirm with right key.

## For Nalta:

Select the tuner mode in OSD menu for cable, antenna or auto select. Use the autoprogram function to search channel.

All rights strictly reserved. Reproduction or issue to third parties in any form which is not permitted without written authority from the proprietor.

CLASS NO:	18.1" TFT SXGA LCD Monitor/TV					
	TYPE : 180MT10P/00C					
BRAND : PHILIPS			8639 000 12344			
2002-05-06						
NAME	Robert Lin	SUPERS	36	590	— 11	10
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

Form 100-05424

[Go to cover page](#)**Sort the programs**

## For Europe:

1. Press the menu key. The main menu is displayed.
  2. Select INSTALL (down key), then press right key. The INSTALL menu appears.
  3. Using the down key, select SORT then press right key. The SORT menu appears. The FROM option is activated.
- Note: this menu works as follows:  
 Change "FROM" (enter the current program number), "TO" (enter the new number). EXCHANGE numbers\* (the operation is carried out).
4. Select the program you wish to renumber using left/right keys or 0 to 9.
  - Example: to renumber program 78 as 2 press 78.
  - (Select TO (using down key) and enter the new number with left/right keys or 0 to 9 (for the example given, enter 2).
  6. Select EXCHANGE (down key) and press right. The message EXCHANGED appears, the exchange takes place. In our example, program 78 is renumbered as 2 (and program 2 as 78).
  7. Select the option FROM (up key) and repeat stages 4 to 6 as many times as there are programs to renumber.
  8. To exit from the menus, press OSD key.

All rights strictly reserved. Reproduction or issue to third parties in any form which is not permitted without written authority from the proprietor.

For Nalta:  
 Use Channel edit function to skip or enable the channel

CLASS NO:	18.1" TFT SXGA LCD Monitor/TV					
	TYPE : 180MT10P/00C					
BRAND : PHILIPS			8639 000 12344			
2002-05-06						
NAME	Robert Lin	SUPERS	36	590	— 12	10
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

Form 100-05424

 Go to cover page**Select language and country**

For Europe:

1. Press the menu key to display the main menu.
2. Select INSTALL (down), then press right.  
The INSTALL menu appears.
- The LANGUAGE option is activated.
- 3 Press right to go into the LANGUAGE menu.
- 4 Select your language with the up down keys.  
The menus will appear in the chosen language.
- 5 Press left to exit the LANGUAGE menu.
- 6 Select the option COUNTRY and press right.
- 7 Select your country with up down keys.  
If your country does not appear in the list, select OTHER.
- 8 Press right to exit the COUNTRY menu.
- 9 To exit from the menus, press OSD.

For NAFTA:

User can select language.

All rights strictly reserved. Reproduction or issue to third parties in any form whatever is not permitted without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor/TV					
	TYPE : 180MT10P/00C					
2002-05-06	BRAND : PHILIPS					
	NAME: Robert Lin	SUPERVISOR: _____	36	590	—	13
	TY	CHECK	DATE: 2002-05-06	PROPERTY OF: PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	10	A4

JAPAN 100% USA04

 Go to cover page**Automatic tuning**

For Europe:

This menu allows you to automatically search for all the programs available in your region (or on your cable network).

1. First carry out operations 1 to 8 above, then:
- 2 Press down once to select AUTO STORE then press right. The search begins.
- After several minutes, the INSTALL menu reappears automatically.
3. If the transmitter or the cable network broadcasts the automatic sort signal, the programs will be correctly numbered.
4. If not, the programs found will be numbered in descending order starting at 99, 98, 97, etc.

Use the SORT menu to renumber them.  
Some transmitters or cable networks broadcast their own sort parameters (region, language, etc.). Where this is the case, make your choice using the Up down keys and confirm with right.  
To exit or interrupt the search, press the menu key.  
6. To exit from the menus, press OSD.

All rights strictly reserved. Reproduction or issue to third parties in any form whatever is not permitted without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor/TV					
	TYPE : 180MT10P/00C					
2002-05-06	BRAND : PHILIPS					
	NAME: Robert Lin	SUPERVISOR: _____	36	590	—	14
	TY	CHECK	DATE: 2002-05-06	PROPERTY OF: PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	10	A4

JAPAN 100% USA04

[Go to cover page](#)**Manual tuning**

For Europe:

This menu allows you to store the programs one by one.

1. Press menu.
2. Select INSTALL (down), then press right. The INSTALL menu appears.
3. Select MANUALSTORE (down) then press right. The menu appears:
4. Press right to go to the SYSTEM menu. Use up/down to choose EUROPE (automatic detection\*) or manual detection with WEST EUR (standard BG reception), EAST EUR (standard DK reception), UK (standard I reception) or FRANCE (standard LL'). Then press left to exit from the menu.
- \* Except for France (standard LL'): select the option FRANCE.
5. Select SEARCH and press right. The search begins. As soon as a program is found, the search will stop. If you know the frequency of the program required, enter its number directly using the 0.9 keys and go to step 7.
6. If reception is un-satisfactory, select FINE TUNE and hold down left or right key.
7. Select PROG.NO (program number) and use the left/right or 0 to 9 keys to enter the desired number.
8. Select STORE and press right. The message STORED appears. The program is stored.
9. Repeat steps 5 to 8 for each program to be stored. To exit: press the OSD key.

For Nafta:

Manual function allows user to finetune the frequency.

All rights strictly reserved. Reproduction or issue to third parties in any form whatever is not permitted without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor/TV					
	TYPE : 180MT10P/00C					
	BRAND : PHILIPS					
2002-05-06				8639 000 12344		
NAME	Robert Lin	SUPER	36	590	— 15	10
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

2002-05-06 05424

[Go to cover page](#)**Program Name**

You may, if you wish, give a name to the first 40 programs (from 1 to 40).

1. Press menu.
2. Select INSTALL (down), then press right. The INSTALL menu appears.
3. Press down 5 times to select NAME (concealed at the bottom of the screen), then press right. The menu appears:
4. Select the program you wish to name using the keys 0.9 or - P+.
- Note: at the time of installation, the programs are automatically named when the identification signal is transmitted.
5. Use the keys left/right to move within the name display area (5 characters).
6. Use keys up/down to choose the characters.
7. Press menu when the name has been entered. The program name is stored.
8. Repeat steps 4 to 7 for each program to be named.
9. To exit from the menus, press OSD.

All rights strictly reserved. Reproduction or issue to third parties in any form whatever is not permitted without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor/TV					
	TYPE : 180MT10P/00C					
	BRAND : PHILIPS					
2002-05-06				8639 000 12344		
NAME	Robert Lin	SUPER	36	590	— 16	10
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

2002-05-06 05424

◀ Go to cover page

Adjust the picture

1. Press menu then right. The PICTURE menu appears;
  2. Use up/down keys to select a setting and left/right keys to adjust.
- Note: the menus is a scroll-down menu.  
Keep the key down held down to access the settings hidden at the bottom of the screen.
- 3 Once the necessary adjustments have been made, select the option STORE and press right to store them.
  - 4 To exit from the menus, press menu.
- Description of the settings:
- BRIGHTNESS: alters the brightness of the image.
  - COLOUR: alters the color intensity.
  - CONTRAST(PICTURE at Nafta): alters the variation between light and dark tones.
  - SHARPNESS: alters the crispness of the image.
  - STORE: stores the picture settings.(No this function in Nafta)
  - TINT: Alters the skin color.( No this function in PAL)
  - COLOUR TEMP (color temperature): adjusts the color temperature of the picture. Three options are available here:  
COOL (blue white), NORMAL (balanced) or WARM (red white).
  - IMAGEMAX: Enhance the picture contrast.(No this function at Europe)

All rights strictly reserved. Reproduction or issue to third parties in any form, wherever not permitted without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor/ TV							
	TYPE : 180MT10P/00C							
2002-05-06	BRAND : PHILIPS							
NAME	Robert Lin	SUPERS	36	590	—	17	10	A4
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

JDM 100 15424

◀ Go to cover page

Adjust the sound

- 1 Press menu, select the SOUND function (down key) and press right key. The SOUND menu appears;
  2. Use up/down keys to select a setting and left/right keys to adjust.
- Note: to access the AVL setting (hidden at the bottom of the screen) hold down key.
- 3 Once the necessary adjustments have been made, select the option STORE and press right to store them.
  4. To exit from the menus, press OSD key.
- Description of the settings:
- TREBLE: alters the level of the high frequency sound.
  - BASS: alters the level of the low frequency sound.
  - BALANCE: to balance the sound between the left and right speakers.
  - DELTA VOLUME (volume difference): allows you to compensate for the volume differences between the different programs or the EXT inputs. This setting is available for programs 1 - 40 and the EXT sockets. (for Europe)
  - STORE: stores the sound settings.
  - AVL (Automatic Volume Leveller): automatic volume control used to avoid sudden increases in volume, particularly when changing programs or during advertisements

All rights strictly reserved. Reproduction or issue to third parties in any form, wherever not permitted without written authority from the proprietor.

CLASS NO.	18.1TFT SXGA LCD Monitor/ TV							
	TYPE : 180MT10P/00C							
2002-05-06	BRAND : PHILIPS							
NAME	Robert Lin	SUPERS	36	590	—	18	10	A4
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

JDM 100 15424

[Go to cover page](#)**Timer Function**

This menu allows you to use your TV as an alarm clock.

1. Press menu.
- 2 Select FEATURES (down) and press right twice.
- The TIMER menu appears :
3. Press right to enter and exit the sub-menus and use keys up/down to adjust:
4. TIME: enter current time.
- Note: the time is updated automatically each time the set is switched on using teletext information taken from program 1. If program 1 does not have teletext, the update will not take place.
5. START TIME: enter the start time.
6. STOP TIME: enter the stop time.
7. PROG; NO.: enter the number of the program required.
8. ACTIVATE: you can set the alarm to be activated:  
ONCE ONLY for a one-off alarm,  
DAILY for a daily alarm or  
STOP to cancel.
9. Press standby to set the TV to standby. It will automatically switch on at the time programmed. If you leave the TV switched on, it will only change program at the time indicated. The combination of the CHILD LOCK and TIMER functions may be used to limit the length of time your television is in use, for example, by your children.

All rights strictly reserved. Reproduction or use to third parties in any form whatever is not permitted without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor/TV						
	TYPE : 180MT10P/00C						
	BRAND : PHILIPS						
2002-05-06				8639 000 12344			
NAME	Robert Lin	SUPERVISOR	36	590	—	19	10
TY		CHECK	DATE	2002-05-06	Project of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

JPG 120 05424

[Go to cover page](#)**Locking Set**

For Europe:

You can bar access to certain programs or completely lock the set by locking the keys.

**Locking programs**

1. Press menu.
2. Select FEATURES (down) and press right.
3. Select PARENTAL CONT. (down) and press right.
4. Enter your confidential access code. The first time, enter the code 0711 then confirm by re-entering 0711. The menu appears.
5. Press right to go into the menu.
6. Use keys up/down to select the required program and confirm with right. The symbol is displayed alongside the programs or sockets that have been locked.
- Press OSD to exit.

**To watch a program which has been locked**

You will now need to enter the confidential code; otherwise the screen will remain blank. The INSTALL menu access is also locked. Caution: In the case of encrypted programs which use an external decoder, it is necessary to lock the corresponding EXT socket.

**To unlock all programs**

- Repeat stages 1 to 4 above, then select CLEAR ALL and press right.  
To change the confidential code:  
Repeat stages 1 to 4 above, then:  
5. Select CHANGE CODE and enter your own 4-digit number.  
6. Confirm by entering it again.  
Your new code will be stored.  
7. Press OSD to exit from the menus.  
If you have forgotten your confidential code, enter the universal code 0711 twice.

**Locking the keys**

1. Press menu, select FEATURES (down) and press right.
2. Select CHILD LOCK (down) and press right to set the lock to ON.
3. Switch off the set and put the remote control out of sight.

CLASS NO.	18.1" TFT SXGA LCD Monitor/TV						
	TYPE : 180MT10P/00C						
	BRAND : PHILIPS						
2002-05-06				8639 000 12344			
NAME	Robert Lin	SUPERVISOR	36	590	—	20	10
TY		CHECK	DATE	2002-05-06	Project of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

JPG 120 05424

[Go to cover page](#)

The set cannot be used (it can only be switched on using the remote control).  
4. To cancel: switch CHILD LOCK to OFF.

For Ntsc:  
The universal code is same as Europe.  
Use auto lock function to select V-chip function.  
Use Closed Captions to select caption mode.

## 3.3 PC signal timing requirement and TV system requirement

## 3.3.1 PC interface

3.3.1.1 Mode storing capacity  
User modes : 17

3.3.1.2 Available timings  
Factory pre-set timing, size and centering are according to the reference timing charts.

All rights reserved. Reproduction or disclosure to third parties in any form without written permission is prohibited without authority from the proprietor.

CLASS NO.

18.1" TFT SXGA LCD Monitor/TV

TYPE : 180MT10P/00C

BRAND : PHILIPS

2002-05-06

8639 000 12344

NAME	Robert Lin
SUPER	36
TY	CHECK
DATE	2002-05-06

NAME	Robert Lin	SUPER	36	590	—	21	10	A4
TY	CHECK	DATE	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.				

[Go to cover page](#)

MODE NO.	1	* 2	* 3	4
RESOLUTION	640 x 350	720 x 400	640 x 480	640x480
Dot clock(MHz)	25.175	28.321	25.175	30.240
f h	31.469kHz	31.469kHz	31.469kHz	35.0kHz
A ( us )	31.78(800 dots)	31.78(900dots)	31.778 (800 dots)	28.571(864 dots)
B ( us )	3.813(96 dots)	3.813(108dots)	3.813 ( 96 dots)	2.116( 64 dots)
C ( us )	1.907(48 dots)	1.907(54dots)	1.907 ( 48 dots)	3.175( 96 dots)
D ( us )	25.42(640 dots)	25.42(720dots)	25.422 (640 dots)	21.164(640 dots)
E ( us )	0.636(16 dots)	0.636(18dots)	0.636 ( 16 dots)	2.116( 64 dots)
f v	70Hz(70.09)	70Hz(70.087)	60Hz ( 59.940 )	66.7 Hz( 66.667 )
O ( ms )	14.27(449 lines)	14.27(449 lines)	16.683 (525 lines)	15.000(525 lines)
P ( ms )	0.064(2 lines)	0.064(2 lines)	0.064 ( 2 lines )	0.086( 3 lines )
Q ( ms )	1.875(59 lines)	1.080(34 lines)	1.049 ( 33 lines )	1.114(39 lines )
R ( ms )	11.12(350 lines)	12.71(400 lines)	15.253 (480 lines)	13.714(480 lines)
S ( ms )	1.208(38 lines)	0.413(13 lines)	0.317 ( 10 lines )	0.086( 3 lines )
SYNC. H/V POLARITY	+/-	-/+	-/-	+/- Or +/-
SEP. SYNC	Y	Y	Y	Y

MODE NO.	5	* 6	7	8
RESOLUTION	640 x 480	640 x 480	800 x 600	800 x 600
Dot clock(MHz)	31.500	31.500	36.000	40.000
f h	37.561kHz	37.500kHz	35.156kHz	37.879kHz
A ( us )	26.413(832 dots)	26.667 ( 840 dots)	28.44 (1024 dots)	26.40 (1056 dots)
B ( us )	1.270(40 dots)	2.032 ( 64 dots)	2.000 ( 72 dots)	3.200 ( 128 dots)
C ( us )	4.064(128 dots)	3.810 ( 120 dots)	3.556 ( 128 dots)	2.200 ( 88 dots)
D ( us )	20.317(640 dots)	20.317 ( 640 dots)	22.22 ( 800 dots)	20.00 ( 800 dots)
E ( us )	0.508(16 dots)	0.508 ( 16 dots)	0.667 ( 24 dots)	1.000 ( 40 dots)
f v	72.809Hz	75Hz ( 75 )	56Hz ( 56.25 )	60Hz ( 60.316 )
O ( ms )	13.735(520 lines)	13.333 ( 500 lines)	17.78 (625 lines)	16.58 (628 lines)
P ( ms )	0.079(3 lines)	0.080 ( 3 lines )	0.057 ( 2 lines )	0.106 ( 4 lines )
Q ( ms )	0.739(28 lines)	0.427 ( 16 lines )	0.626 ( 22 lines )	0.607 ( 23 lines )
R ( ms )	12.678(480 lines)	12.80 (480 lines)	17.07 (600 lines)	15.84 (600 lines)
S ( ms )	0.023(1 lines)	0.027 ( 1 line )	0.028 ( 1 line )	0.026 ( 1 line )
SYNC. H/V POLARITY	+/-	-/-	+/+	+/-
SEP. SYNC	Y	Y	Y	Y

A : H-Total  
B : H- Sync width  
C : H- Back porch  
D : H- Video width  
E : H- Front porch  
O : V-Total  
P : V- Sync width  
Q : V- Back porch  
R : V- Video length  
S : V- Front porch

CLASS NO.	18.1TFT SXGA LCD Monitor/ TV	8639 000 12344
TYPE	180MT10P/00C	
BRAND	PHILIPS	
2002-05-06		
NAME	Robert Lin	SUPER
TY	CHECK	DATE
	2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

**PHILIPS**

## GENERAL PRODUCT SPECIFICATION

180MT10P LMT 83

◀ Go to cover page

MODE NO.	9	* 10	11	* 12
RESOLUTION	800 x 600	800 x 600	832 x 624	1024 x 768
Dot clock(MHz)	50.000	49.500	57.280	65.000
f h	48.077kHz	46.875kHz	49.722kHz	48.363kHz
A (us)	20.80 (1040dots)	21.33 (1056dots)	20.11 (1152dots)	20.677(1344 dots)
B (us)	2.400 ( 120 dots)	1.616 ( 80 dots)	1.117 ( 64 dots)	2.092(136 dots)
C (us)	1.280 ( 64 dots)	3.232 ( 160 dots)	3.911 ( 224 dots)	2.462(160 dots)
D (us)	16.00 ( 800 dots)	16.162 ( 800 dots)	14.52 ( 832 dots)	15.754(1024 dots)
E (us)	1.120 ( 56 dots)	0.323 ( 16 dots)	0.559 ( 32 dots)	0.369(24 dots)
f v	72Hz ( 72.188)	75Hz ( 75.000)	75Hz ( 74.546)	60.004Hz
O (ms)	13.85 (666 lines)	13.333 (625lines)	13.41 (667 lines)	16.666(806 lines)
P (ms)	0.125 ( 6 lines)	0.064 ( 3 lines)	0.060 ( 3 lines)	0.124(6 lines)
Q (ms)	0.478 ( 23 lines)	0.448 ( 21 lines)	0.784 ( 39 lines)	0.600(29 lines)
R (ms)	12.48 (600 lines)	12.80 (600lines)	12.55 (624 lines)	15.880(768 lines)
S (ms)	0.770 ( 37 line )	0.021 ( 1 line )	0.020 ( 1 lines)	0.062(3 lines)
SYNC. H/V	+ / +	+ / +	+ / +	- / -
POLARITY	Y	Y	Y	Y
SEP. SYNC				

All rights strictly reserved. Reproduction or issue  
to other parties in any form whatever is not permitted  
without written authority from the proprietors.

MODE NO.	13	* 14	15	16
RESOLUTION	1024x768	1024x768	1152x870	1280x1024
Dot clock(MHz)	75.000	78.750	100	108
f h	56.476kHz	60.023kHz	68.681kHz	63.981kHz
A (us)	17.707 (1328dots)	16.66 (1312dots)	14.56 (1456dots)	15.63(1688 dots)
B (us)	1.1813 ( 136 dots)	1.219 ( 96 dots)	1.28 ( 128 dots)	1.037(112 dots)
C (us)	1.920 ( 144 dots)	2.235 ( 176 dots)	1.44 ( 144 dots)	2.296(160 dots)
D (us)	13.653 ( 1024 dots)	13.003 ( 1024dots)	11.52 ( 1152 dots)	11.852(1280 dots)
E (us)	0.320 ( 24 dots)	0.203 ( 16 dots)	0.32 ( 32 dots)	0.445(48 dots)
f v	70Hz ( 70.069)	75Hz ( 75.029)	75Hz ( 74.979)	60.020Hz
O (ms)	14.272 (806 lines)	13.328 (800lines)	13.333 (916 lines)	16.661(1066 lines)
P (ms)	0.106 ( 6 lines)	0.050 ( 3 lines)	0.044 ( 3 lines)	0.047(3 lines)
Q (ms)	0.513 ( 29 lines)	0.466 ( 28lines)	0.568 ( 39 lines)	0.594(38 lines)
R (ms)	13.599 (768 lines)	12.795 (768lines)	12.678 (870 lines)	16.005(1024 lines)
S (ms)	0.053 ( 3 line )	0.017 ( 1 line )	0.043 ( 4 lines)	0.015(1 lines)
SYNC. H/V	-/-	+ / +	- / -	+ / +
POLARITY	Y	Y	Y	Y
SEP. SYNC				

CLASS NO.	18.1" TFT SXGA LCD Monitor/ TV		
	TYPE : 180MT10P/00C		
	BRAND : PHILIPS		
2002-05-06	8639 000 12344		
NAME	Robert Lin	SUPER:	36
TY	CHECK	DATE	2002-05-06
Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

2006 10-05464

GENERAL PRODUCT SPECIFICATION 84 180MT10P LMT

◀ Go to cover page

MODE NO.	17			
RESOLUTION	1280x1024			
Dot clock(MHz)	135.000			
f h	79.976kHz			
A (us)	12.504 (1688dots)			
B (us)	1.067 ( 144 dots)			
C (us)	1.837 ( 248 dots)			
D (us)	9.481 ( 1280dots)			
E (us)	0.119 ( 16 dots)			
f v	75Hz ( 75.024)			
O (ms)	13.329 (1066 lines)			
P (ms)	0.038 ( 3 lines)			
Q (ms)	0.475 ( 38 lines)			
R (ms)	12.804 (1024 lines)			
S (ms)	0.012 ( 1 line )			
SYNC. H/V	+ / +			
POLARITY	Y			
SEP. SYNC				

All rights strictly reserved. Reproduction or issue  
to other parties in any form whatever is not permitted  
without written authority from the proprietors.

CLASS NO.	18.1" TFT SXGA LCD Monitor/ TV		
	TYPE : 180MT10P/00C		
	BRAND : PHILIPS		
2002-05-06	8639 000 12344		
NAME	Robert Lin	SUPER:	36
TY	CHECK	DATE	2002-05-06
Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

2006 10-05464

[Go to cover page](#)

## 3.3.1.3 Horizontal scanning

Sync polarity : Positive or Negative  
 Scanning frequency : 30 - 80 KHz

## 3.3.1.4 Vertical scanning

Sync polarity : Positive or Negative  
 Scanning frequency : 56 - 75 Hz

## 3.3.2 TV Interface

Color system:  
 NTSC  
 PAL  
 SECAM

## White point :

Normal(Natural) : x=300+/-20 y=325 +/-20  
 Warm(Soft)  
 Cool(Rich)

## SOUND POWER OUTPUTS:

- Stereo : 2 x 2.5 Watts,

## SOUND CONTROLS:

- Volume
- Mute
- Treble
- Bass
- Balance
- Smart sound
- AVL :
- **SOUND MUTE**: When no video recognition on terrestrial tuner signal the sound must be muted.

All rights reserved. Reproduction or issue to third parties in any form whatever is not permitted without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor/TV		
	TYPE	: 180MT10P/00C	
	BRAND	: PHILIPS	
2002-05-06	8639 000 12344		

[Go to cover page](#)

All rights strictly reserved. Reproduction or issue  
to third parties in any form whatsoever is not permitted  
without written authority from the proprietor.

## Connections

## SCART (Europe model only)

Specification : Full SCART according EN50049-1A3  
- The soundoutput signal on the connector must be muted in case of no terrestrial video input.  
Connector type : 21 pin black euro connector  
ESD-protected : Yes

## CINCH A/V, component input(Nafta and Ap only)

Location : Rearside  
Spec. input :- CVBS: Source supplies DC coupled signals 1 Vpp, 75W.  
- Audio: Impedance > 10 kW. The input will be overloaded when the signal > 1.5V rms.  
- Audio levels:  
- Nominal: 0.5V rms.  
- maximum: 1.5V rms.  
Connector type :- Cinch  
ESD-protected : 15kV

## HEADPHONE

Option : Yes  
Location : Side  
Peripherals : Headphones with impedance between 8 - 600W  
Features : - When headphone plug is connected, loudspeaker sound is muted.  
- Volume control: with the loudspeaker volume.  
Connector type : 3.5 mm stereoJack, with switch  
Specifications : - Output: 8 W < 4 mW  
600 W < 4 mW  
- Sound is the same as from the loudspeakers.  
ESD-protected : 15kV

## S-video:

Location : Rearside  
Input : 75W.

## PC-stereo input

- Audio: Impedance > 10 kW. The input will be overloaded when the signal > 1.5V rms.  
- Audio levels:  
- Nominal: 0.5V rms.  
- maximum: 1.5V rms.

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV					
	TYPE : 180MT10P/00C					
2002-05-06	BRAND : PHILIPS			8639 000 12344		
NAME	Robert Lin	SURNAME	36	590	— 27	10
TY	CHECK	DATE	2002-05-06	Project of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

JPM 100 05424

[Go to cover page](#)

## 3.4 Power input connection

Power cord length : 1.8 M  
Power cord type : 3 leads power cord with protective earth plug.(NAFTA model )  
Europe type power cord ( Europe and AP model )

Power adapter: +12V +/- 1V 6000mA

## 3.5 Power management

## PC mode

The power consumption and the status indication of the set with power management function are as follows,

STATUS	Horizontal Pulse	Vertical Pulse	Power Spec Pulse	LED
Stand-by	No Pulse	Pulse	< 2 W	as normal on Flash
Suspend	Pulse	No Pulse	< 2 W	Flash
off	No Pulse	No Pulse	< 2 W	Flash
Power switch off	-	-	< 1 W	Off

## TV mode

The power consumption and the status indication of the set with power management function are as follows,

STATUS	Power Spec	LED
Stand-by	On	as normal on Flash
Power switch	off	< 2 W Off

## 3.6 Display identification

In accordance with DDC requirement DDC2B.

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV					
	TYPE : 180MT10P/00C					
2002-05-06	BRAND : PHILIPS			8639 000 12344		
NAME	Robert Lin	SURNAME	36	590	— 28	10
TY	CHECK	DATE	2002-05-06	Project of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

JPM 100 05424

4.0 Visual characteristics  
4.1 Test conditions

Unless otherwise specified, this specification is defined under the following conditions.

- (1) Input signal : As defined in 3.3.1.2, 1280 x 1024 non-interlaced mode (80 KHz), signal sources must have 75 ohm output impedance.
- (2) Luminance setting : controls to be set to 250 Nits with full screen 100 % duty cycle white signal.
- (3) Warm up: more than 30 minutes after power on with signal supplied.
- (4) Ambient light: 400 -- 600 lux.
- (5) Ambient temperature: 25 ± 2 °C

4.2 Resolution

Dot rate (MHz)	H.freq (KHz)	Mode	Resolution	V.freq (Hz)
25.175	31.469	IBM VGA	640 * 350	70.087
28.322	31.469	IBM VGA	720 * 400	70.087
25.175	31.469	IBM VGA	640 * 480	59.940
30.240	35.000	MACINTOSH	640 * 480	66.667
31.500	37.861	VESA	640 * 480	72.809
31.500	37.500	VESA	640 * 480	75.000
36.000	35.156	VESA	800 * 600	56.250
40.000	37.879	VESA	800 * 600	60.317
50.000	48.077	VESA	800 * 600	72.188
49.500	46.875	VESA	800 * 600	75.000
57.300	49.700	MACINTOSH	832 * 624	75.000
65.000	48.363	VESA	1024 * 768	60.004
75.000	56.476	VESA	1024 * 768	70.069
78.750	60.023	VESA	1024 * 768	75.029
100	68.681	MACINTOSH	1152 * 870	74.979
108	63.981	VESA	1280 * 1024	60.020
135	79.976	VESA	1280 * 1024	75.024

All rights strictly reserved. Reproduction or disclosure to third parties in any form whatever is not permitted without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV					
	TYPE : 180MT10P/00C					
2002-05-06	BRAND : PHILIPS			8639 000 12344		
NAME: Robert Lin	SUPERVISOR:	36	590	— 29	10	A4
TY	CHECK	DATE: 2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

ZRMK 102 05624

4.3 Brightness: >250 nits at maximum contrast and Brightness.  
(at center of the screen, Fig. 1 )

4.4 Image size  
4.4.1 Actual display size  
359.0 x 287.2 mm

4.5 Brightness uniformity

Set contrast at 100% and turn the brightness to Max.(At original color)

Apply the Fig 1, it should comply with the following formula:

$$\frac{\text{Minimum luminance of five points (brightness)}}{\text{Maximum luminance of five points (brightness)}} > 75\%$$

4.6 PC White color adjustment

There are two factory preset white color 9300K and 6500K.

Apply full white pattern, with brightness in 100 % position and the contrast control at 50% position.  
The 1931 CIE Chromaticity (color triangle) diagram (x,y) coordinate for the screen center should be:

9300K CIE coordinates      X = 0.281    0.020  
Y = 0.311    0.020

6500K CIE coordinates      X = 0.312    0.020  
Y = 0.338    0.020

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV					
	TYPE : 180MT10P/00C					
2002-05-06	BRAND : PHILIPS			8639 000 12344		
NAME: Robert Lin	SUPERVISOR:	36	590	— 30	10	A4
TY	CHECK	DATE: 2002-05-06	Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

ZRMK 102 05624

[Go to cover page](#)

#### 4.7 TV White color adjustment

There is one factory preset white color  $x=300 +/-20$   $y=325 +/-20$  for TV RF signal.

Use FLUKE54200 color temp pattern, with TV smart setting set at natural ( movies at Nafta ) mode.

And color setting is normal.

Use The 1931 CIE Chromaticity (color triangle) diagram (x,y) coordinate for the screen center should be:  $x=300 +/-20$   $y=325 +/-20$

#### 4.8 TV picture centering.

Use CVBS input with cross hatch pattern to check the picture centering and should be

Left(size)-right(size)  $<+/- 3\text{mm}$ .

Up(size)-down(size)  $<+/- 3\text{mm}$ .

All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written consent from the proprietor.

CLASS NO.		18.1" TFT SXGA LCD Monitor / TV					
		TYPE : 180MT10P/00C			8639 000 12344		
2002-05-06							
NAME	Robert Lin	SUPER	36	590	—	31	10
TY	CHECK	DATE	2002-05-06	Project of	PHILIPS	ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

L046 100 05422

[Go to cover page](#)

#### 5.0 Mechanical characteristics

##### 5.1 Controls

- Front Control :
- DC power switch
  - Power LED
  - PC/TV LED
  - PC/TV select key
  - TV/Video source select key
  - Up key
  - Down key
  - Left key
  - Right key
  - Enter key
  - PIP ON/OFF key
  - Auto adjust key

##### Rear I/O :

- PC D-sub signal cable
- DC 12V input
- Tuner input
- SCART input ( Europe model )
- Cinch input ( NAFTA and AP model )
- S-Video input
- RCA L,R audio input ( audio input for S-Video )
- Mini jack PC audio input

##### Side I/O :

- Headphone output
- Line output

#### 5.2 Unit dimension / Weight

Set dimension (incl. pedestal): **452 mm W X 452 mm H X 200 mm D**

Net weight : : **6.3 Kg**

#### 5.3 Tilt and swivel base

tilt angle : 0 to 20 degree

#### 5.4 Transportation packages

##### 5.4.1 Shipping dimension/Weight

Carton dimension : **554 mm W X 544 mm D X 255 mm H**  
Gross weight : **9.3 Kg**

CLASS NO.		18.1TFT SXGA LCD Monitor / TV					
		TYPE : 180MT10P/00C			8639 000 12344		
2002-05-06							
NAME	Robert Lin	SUPER	36	590	—	32	10
TY	CHECK	DATE	2002-05-06	Project of	PHILIPS	ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

L046 100 05422

## 5.4.2 Block unit / Palletization (Air shipment)

layers/block	sets/layer	sets/block unit
5	4	20

## 6.0 Environmental characteristics

The following sections define the interference and susceptibility condition limits that might occur between external environment and the display device.

## 6.1 Susceptibility of display to external environment

## Operating

- Temperature : 0 to 35 degree C
- Humidity : 20% to 80%
- Altitude : 0-3658m
- Air pressure : 600-1100 mBAR

## Storage

- Temperature : -20 to 60 degree C
- Humidity : 95% max (< 40°C)
- Altitude : 0-12192m
- Air pressure : 300-1100 mBAR

Note: recommend at 0 to 35 C, Humidity less than 60 %

All rights strictly reserved. Reproduction or issue to third parties in any form whatever is not permitted without written authority from the proprietor.

CLASS NO:	18.1" TFT SXGA LCD Monitor/ TV					
	TYPE : 180MT10P/00C					
2002-05-06	BRAND : PHILIPS			8639 000 12344		
NAME: Robert Lin	SUPERS:	36	590	— 33	10	A4
TY	CHECK	DATE: 2002-05-06	Property of: PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

2004-10-11 05424

## 6.2 Transportation tests

Standard		Philips UAN-D1400	NSTA
Drop Test	Height	76 cm	76 cm
	Sequence	1 corner 3 faces (-10deg C x 16 hrs)	1 corner 3 edge (room temp) 6 fac
	Test Result	Electrical function ok Mechanical function ok No serious damage on set appearance (room temp/-10 c, humidity 70 %)	
Vibration Test	Sequence	(1) PACKAGING 5-200 Hz, 0.73 G, 30 min. for Each axis	
		(2) OPERATING 10-50-10 Hz, 0.35 mm, 30 min. for Each axis	
	Test Result	Electrical function ok Mechanical function ok No serious damage on set appearance	
Bump Test		For design evaluationonly Operating 10 G, 11 msec, 1000 cycles Temperature : 23 C Humidity : 60 % air pressure : 100 kpa (according to DSD draft standard UAN-D636)	

CLASS NO:	18.1" TFT SXGA LCD Monitor/ TV					
	TYPE : 180MT10P/00C					
2002-05-06	BRAND : PHILIPS			8639 000 12344		
NAME: Robert Lin	SUPERS:	36	590	— 34	10	A4
TY	CHECK	DATE: 2002-05-06	Property of: PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.			

2004-10-11 05424

[Go to cover page](#)

- 6.3 Display disturbances from external environment  
According to IEC 801-2 for ESD disturbances
- 7.0 Reliability
- 7.1 Mean Time Between Failures  
System MTBF (Excluding the LCD panel and CCFL) : 50,000 hrs  
CCFL MTBF : 50,000 hrs
- 8.0 Quality assurance requirements
- 8.1 Acceptance test  
according to MIL-STD-105D Control II level  
  
AQL : 0.65 (major)  
2.5 (minor)  
(please also refer to annual quality agreement)
- 9.0 Serviceability  
The serviceability of this monitor should fulfill the requirements which are prescribed in UAW-0346 and must be checked with the check list UAT-0361.

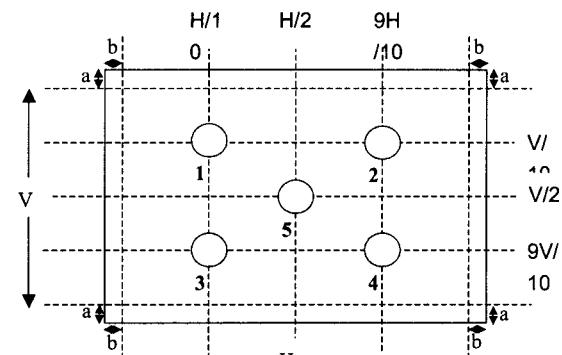
All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV					
	TYPE : 180MT10P/00C					
2002-05-06	BRAND : PHILIPS			8639 000 12344		
NAME	Robert Lin	SUPERS.	36	590	—	35
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

JDE 100 15424

[Go to cover page](#)

Fig 1: Brightness and Uniformity measurepoints



All rights strictly reserved. Reproduction or issue to third parties in any form whatsoever is not permitted without written authority from the proprietor.

CLASS NO.	18.1" TFT SXGA LCD Monitor / TV					
	TYPE : 180MT10P/00C					
2002-05-06	BRAND : PHILIPS			8639 000 12344		
NAME	Robert Lin	SUPERS.	36	590	—	36
TY	CHECK	DATE	2002-05-06	Property of	PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.	A4

JDE 100 15424